'It's Important to Know In Time'

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The Newspaper of the Industry

Air Conditioning & REFRIGERATION NEWS

Production Tools for Victory

AN INTERNATIONAL INSTITUTION ★ SUBSCRIBERS ALL OVER THE WORLD ★

Technical Governmental

Reentered as second-class matter October 3, 1936 at the post office at Detroit, Michigan, under the Act of March 3, 1879. Trade Mark Registered U. S. Patent Office.

'Written To Be Read on Arrival'

Issued Every Monday at Detroit, Michigan

APR. 24, 1944

Vol. 41, No. 17, Serial No. 788

Established 1926.

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By George F. Taubeneck

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Wait & Pray

Washington today is a place of tense, ominous calm. The top executives are totally unavailable. Most of them are out of town. Many seem to be "ill." Their subordinates are extraordinarily close-mouthed.

One of these days there's going to be some terrific news—maybe lots of it, from many different quarters of the globe.

But right now all decisions are awaiting military action, the "explosive" military action of invasion, or invasions. All that can be done has been done from this end, apparently; and since future administrative moves and decisions will necessarily await the outcome of these armed explosions, there's practically no news out of Washington.

In the meantime, nerves are taut, tempers sharp, restlessness evident everywhere. As one official put it: "All we can do now is wait and pray."

New Aid for Small Business

New source of help for the small businessman is the Small Business Division, Bureau of Foreign & Domestic Commerce, Washington 25, D. C. Quincy Adams, formerly of Dun & Bradstreet, is the man in charge.

Help is promised small business men on problems of taxation, credit, finance, production, and distribution.

They say they want to listen to your problems!

Russian Market

Washington circles are buzzing with reports that the Russians are seeking to establish arrangements with the United States for the importation of $10,000,000,000 worth of machinery, chemicals, and durable consumers goods immediately after the war ends in Europe.

That's a lot of goods. It is expected that the Russians will want credit at first, repayment to be made in raw materials and gold on a relatively short-term basis.

The Russians are said to be immensely impressed not only with the quality of American manufacturing as represented by products received under Lend-Lease, but also with our ability to deliver.

America's heroic measures to deliver Lend-Lease materials through Iran have been so successful under such extraordinary difficulties that the Russians are said to believe we can perform miracles. It has undoubtedly had much to do with their current successes in the Ukraine.

Export market planners should start now preparing to handle their share of this business.

More Food

Agricultural leaders now begin to admit that food surpluses and prospects of surpluses are becoming their biggest problems. It's entirely possible that production of food in this country may reach a new high for the sixth successive year.

Farmers are planting over 10,-

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Revised Memo 115 Aid To Deferment Of 'Over-30' Men

WASHINGTON, D. C. — National Selective Service Headquarters has issued a revised Local Board Memorandum No. 115 which should operate to ease the situation for men over 30 years of age who are engaged in work that is essential to or in support of the War Effort, which, of course, includes refrigeration repairmen.

The revisions that bear on this point are Sections 3 (c) and 5 of the Memorandum. The former section having to do with the age factor reads:

"For registrants ages 30 and over, the requirements that a registrant must be a 'necessary man' in war production or in support of the war effort will be applied less strictly with the increased age."

The other section having to do with the irreplaceability factor reads:

"The irreplaceability of the registrant may be based on various factors which should be considered carefully. There may be a shortage of men possessing the registrant's special training, qualifications, or skill. There may be such a drastic unskilled labor shortage that the registrant is irreplaceable without reference to any special training, qualification, or skill. In either case, there may be a shortage of the supply of labor for replacement purposes at the place where the registrant is working even though there is no overall shortage throughout the nation."

"As a result of these and other changes in the memorandum which guides local boards in granting deferments," advises one Manpower official, "we would suggest that the information furnished by the em-

(Concluded on Page 4, Column 5)

FLASH!

'Freon-22' Deliveries Restricted

WASHINGTON, D. C.—Deliveries of "Freon-22" have been sharply restricted by the War Production Board, particularly for use in any new or used system of comfort air conditioning and any installation for storing or dispensing carbonated or malt beverages. This order, text of which has not yet been received, will be known as M-28a.

Principal utilization of "Freon-22" will be in the field of low temperature experimental work such as testing flying clothes and instruments under simulated stratospheric conditions, and for the shrinking of metals.

Hopes of air conditioning system users that "Freon-22" which has hitherto been unrestricted, might be utilized to substitute for restricted "Freon-12" are thus dashed.

Applicants Asked To Check Requirements For Locker Plants

WASHINGTON, D. C.—Those who wish to get governmental permission for new or expanded refrigerated locker storage installations should inform themselves of some of the revised requirements for the applications.

Form WPB-617 is to be used in the installation of a system is involved and the total cost of the project less the cost of the refrigeration equipment (condensing unit,

(Concluded on Page 4, Column 4)

No Usable Item Can Be Repaired On CMP Rating

But Ratings Under 9A Order Can Be Used To Rebuild Equipment

WASHINGTON, D. C.—The procedure under which repairmen purchase controlled materials, other materials, parts, and sub-assemblies, has been amended to indicate that they may use it to obtain materials with which to recondition or rebuild damaged or used items for resale, the War Production Board announced April 15.

The changed procedure, which is contained in CMP Regulation No. 9A, as amended April 15, 1944, redefines the term "repairmen" to include persons who recondition or rebuild damaged or used items for resale. The amendment also indicates that repairmen may use materials and parts which they purchase under the procedure to carry on such reconditioning or rebuilding.

However, they may not use such materials or parts to replace material or parts which are still usable nor to replace materials or parts solely to improve the original design of the article being reconditioned or rebuilt.

The amended regulation also prohibits repairmen from using the AA-3 preference rating which it assigns to obtain the following items: (1) capacitors, (2) microphones and loudspeakers, (3) resistors, (4) transformers, (5) tubes, and (6) paint. These items are made available to repairmen and retailers on a pro-rata

(Concluded on Page 4, Column 2)

Servel Has Plans For Hermetic Line; Names New Sales Chiefs

EVANSVILLE, Ind.—In revealing plans for increased postwar production of commercial refrigeration condensing units, the Electric Refrigeration Division of Servel, Inc. has promoted W. J. Aulsebrook, Harry F. Bell, and Carl L. Olin, announces Geo. S. Jones, Jr., vice president in charge of sales.

A new line of hermetically sealed condensing units for all popular commercial applications is ready for tooling, and enlarged quarters have been earmarked for this division's

(Concluded on Page 4, Column 5)

Seamless Steel Tube Okayed For Coils

WASHINGTON, D. C.—Acting to improve the performance and reduce the man-hours of labor in the fabrication and maintenance of coil or tube assemblies for refrigeration condensers or coolers, WPB on April 17 removed restrictions on both the use of seamless steel tubing and the wall thickness of the tubing permitted.

Previously manufacturers had been limited to the use of welded steel tubing of light gauge. Difficulties encountered in manufacturing and operation of condensers as a result of using this type of tubing had resulted in the splitting of tubes and hidden defects that only became evident after use, thus necessitating frequent repairs and replacements, WPB said.

This action, covered by an amendment to Limitation Order L-126, will result in an increased use of approximately 300 tons of seamless steel tubing per quarter, WPB estimated.

Our Apologies

EVERYBODY has surely heard of the paper shortage by this time, and knows that publishers are operating on quotas representing a substantial cut from their consumption of paper in 1942 in printing their publications.

We call attention to this wartime fact in explanation to those who have sent us their $4.00 checks to pay for subscriptions to Air Conditioning & Refrigeration News, but have not yet received a copy of the paper.

More than 7,500 manufacturers, wholesalers, retailers, and service men are now paid subscribers to the News, and no new subscriptions have been solicited for a long time, because our consumption of paper is stretching our quota to the limit. Despite this fact new subscriptions are pouring in.

As rapidly as these orders can be filled—through some present subscriber's failure to renew or because of success in further paper savings—these new subscriptions will be entered. In the meantime, please be patient. Money will be cheerfully refunded, of course, if you do not care to wait. But we are anxious to serve you, and will do everything in our power within the WPB regulations to see that your order is filled eventually.

Directive on Labor Seen as Hindering Civilian Production

WASHINGTON, D. C.—Sharp curtailment of civilian goods production implied in the recent military-inspired directive issued by L. M. Boulware, vice chairman of the War Production Board in charge of industry operations, may be eased in answer to protests by industry representatives backed by officials of WPB and the Office of Civilian Requirements, it was indicated here.

Under the directive, producers in Group 1 labor areas were categorically prohibited from producing more civilian goods than they produced, or were permitted to produce (whichever was the smaller), during the first quarter of 1944. Producers in Group 2 areas were placed under the same restrictions, except that in "a rare and unusual circumstance," special permission might be given for increased production.

The Boulware directive also urged that existing programs for civilian

(Concluded on Page 4, Column 1)

Gov't Seeks Buyers For 7-Ft. Iceboxes

WASHINGTON, D. C. — Procurement Division of the U. S. Treasury Department will soon sell several hundred cabinets of about 7 cu. ft. capacity, designed for ice refrigeration, from its regional office at the Fuller Building, 8th and Walnut Sts., Cincinnati.

Any individual or company who may be interested in bidding on this equipment should write to J. H. Little at the Cincinnati office and request an invitation to bid. It is not likely that the invitations to bid will be closed off for another three weeks.

The equipment will be sold in lots of five or multiples of five. The invitation to bid will contain information about the OPA regulations governing disposal of the equipment by the purchasers.

The Procurement Division indicated that it would have some commercial refrigerators for disposal sale in the near future.

Rema, NRSJA Seek Answer To Many Problems

Meetings Will Spotlight Government Relations, Policies For Postwar

CHICAGO—Joint meeting of the Refrigeration Equipment Manufacturers Association and the National Refrigeration Supply Jobbers Association on Wednesday morning, April 26, will highlight conventions of the two groups at the Stevens hotel here April 25 and 26.

Talks on matters of general industry interest, given by both men from industry and government, will mark the joint session, which is scheduled to open at 9:45 a.m. in the North Ballroom of the Stevens. The "time schedule" for talks at this meeting is as follows:

9:50 Word of Welcome from R. H. Luscombe, president, R.E.M.A., and Harry Alter, president, N.R.S.J.A.

10:00 "Government Planning for the Postwar Period," H. B. McCoy, U. S. Department of Commerce.

10:30 "New Fields for the Refrigeration Industry," George F. Taubeneck, editor, AIR CONDITIONING & REFRIGERATION NEWS.

11:00 "The Office of Civilian Requirements and Its Interest In Our Civilian Economy Under Wartime Conditions," Henry A. Dinegar,

(Concluded on Page 24, Column 1)

Quick Conversion On Appliances Is Out—Andrews

CHICAGO — The major appliance industries face a serious problem in their efforts toward conversion to peacetime production, predicted H. L. Andrews, vice president of General Electric Co., in his talk to the eleventh annual commercial meetings of the Edison Electric Institute in Chicago April 4.

An interval of six months, at least, will follow the release of trained men and materials before the production of such complicated equipment as refrigerators and washing machines can get under way, he said.

So much of the war equipment now being made by the major appliance companies will continue to be made right up to the time the shooting stops, he explained. G-E originally was under contract to make 1,000 flying suits a week. Their original contract for the "bazooka" called for the same figure.

Today the company is making many times that number, he stated, and there is no prospect being given except that production must continue right on up to the hilt of armistice.

At the beginning of the year Washington had hoped to be able to release some major industrial production for badly needed civilian appliances by mid-1944, he revealed, but invasion plans now are calling for all-out production in most of the materiel these companies are producing.

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End-Use Information Asked on 'Freon-22'

DETROIT—End-use information is apparently now being requested on all orders for "Freon-22."

Local agents have been notified that "effective at once on 'Freon-22' orders it is necessary that complete end use be furnished (blood plasma, testing instruments, etc.), and also the temperatures that are expected to be produced in the actual equipment to be charged.

EEI Conference Touches On Plans Toward Greater Cooperation With Postwar Appliance Dealer

Many Angles of Dealer Security Discussed In Utility Talks

By Ross Potter

CHICAGO—What can the appliance dealer do for himself, and what can the manufacturer and the utility do for him, to improve his standing in appliance retailing when peacetime production begins again?

More than 600 utility executives and appliance manufacturers, meeting for a three-day series of discussional talks at Chicago's Edgewater Beach hotel April 3-5, heard this question touched upon many times during the Edison Electric Institute's eleventh annual commercial meetings this year.

The sum total of the convictions they expressed appears in outline form on this page. Consistent throughout is the belief that successful merchandising for all three will be, more than ever before, a matter of working together.

The fact that dealers and distributors alike look to the utility for leadership and initiative in the sounding out of operating conditions in the existing field and in the breaking of ground for territorial expansion was brought out time and again.

The dealer himself, on the other hand, is in a position to give the utility and the manufacturer invaluable information on conditions in the local market.

Consensus of Suggestions Brought Out During EEI Meetings

I. The Dealer

A. Keep up to date on physical preparations:

1. Prospect lists—who wants what specific appliances first?
2. Work out paper controls on your business activities.
3. Plan the preliminary details for store expansion, service department, store layout, display. Others like to feel that they aren't doing it all.

B. Work toward cooperation with your manufacturer and your power company:

1. Ask for, not just expect, their cooperation. Guide them, direct them to the details of your specific problem.
2. Keep them posted on local problems and conditions that concern both you and them.

II. The Manufacturer

A. Give equal consideration to all your dealers and distributors:

1. Make prices and purchase terms the same throughout a territory.
2. No excessive quotas.
3. Adequate business territories for each man to cover.
4. No long-term service guarantees by the manufacturer.
5. No skipping of the middleman.

B. Educational programs:

1. Effective selling.
2. Latest information on servicing, both new and old models.
3. Floor layout and display ideas.
4. Financing and credit operations.
5. Scheduling local advertising, and local tie-in with national advertising.

III. The Utility

A. Consider the dealer as part of your own merchandising program:

1. His successful selling builds your load. Confine your selling to pioneering and experimental activity.
2. Keep your selling prices, terms, and installation costs parallel to his own.

B. Work with him on his own ground:

1. Local advertising.
2. Home service and other educational programs.

C. Include him in your own planning conferences:

1. Give him figures on current load and appliance saturation in your area.
2. Invite him to sit in on your postwar planning.

The realization of the close relationship between the three was discussed with more intensity than usual because of one all-important fact: the coming of armistice is going to mean starting from scratch along many, many lines, and the opportunity for working together has never before been so limitless.

The dealer's first responsibility, it was agreed, is to have his own house in order, from the ground up. Unless he is on his toes, ready for whatever comes up, he can't do even himself any good, much less anybody else.

CUSTOMER CONTACTS

The specific details of this point were discussed most carefully by W. J. Cashman, of Landers, Frary & Clark. "Just keeping a prospect list isn't enough," he pointed out. "Prospective customers are willing now, as they never have been before, to talk over the specific appliances they are planning on buying.

"Dealers who have taken the trouble to call upon their customers in person and talk the postwar picture over with them have been able to come away with the exact knowledge of the appliances a customer will want, which one he wants first, and the specific models that look best to that customer.

"Most important of all, the dealer has put himself on the inside track as the man who's going to get that order. A dealer with a file of prospects like that is a man who can talk turkey with his local utility and with his manufacturer."

THE LITTLE MAN

The retail merchant too often is a little guy on the ragged edge, as J. T. Meek, of the Illinois Federation of Retail Assns., put it.

"If the manufacturer, or the utility man, keeps the aces up his sleeve the little man goes under," he said. "More often than not they aren't trying to sell him short, but if they don't give him the help and the information and the encouragement he needs, it all adds up to the same thing.

"The manufacturer himself isn't always a big guy. And you'll pass a thousand little distributors before you come to a Macy or a Wanamaker. They'd all like to play ball together, but they don't know how. And so it's every man for himself.

"That's why it's up to the bigger manufacturers and the bigger power companies to show them the way. And if they don't, the little man is sunk. Help him sell his merchandise at the lowest possible cost. He'll work his head off as long as he can see daylight ahead. But he needs your help. Include it in your planning now."

A point equally important and part of the same discussion of dealer protection was that brought out by F. A. Coffin, of Milwaukee's Wisconsin Electric Power Co.—the need for preventing the return of various pressure methods exerted on dealers and distributors by utilities as well as manufacturers.

"War scarcities have wiped out the prewar established practices of excessive quotas, early release of new models, cut-price deals to a favored few, and many others," he said.

"It would be a lot healthier outlook for everybody concerned if we never let them come back. I think very few would protest if we could unanimously adopt the principle of offering no appliances, and no terms on appliances, that will not be open to all independent merchants in a territory.

"That looks on the surface like a purely manufacturing problem, but it applies to power companies too, wherever they sell appliances. Their sale prices and installation costs shouldn't undercut those of the dealers around them."

MANPOWER SOURCES

The elimination of this kind of competition, suggested G. H. Smith, of Chicago's Edison General Electric Appliance Co., probably would obsolete the prewar definition of an appliance dealer: a man who's found a way to "almost" make a living.

The postwar problem of how to create new dealers, however, he discussed with seriousness and detail. There are, besides the growing generation of young men looking for sound and profitable businesses, the body of men who once were engaged in appliance selling but who for one reason or another have left it.

This last source should not be overlooked. Some left to go into service, some for better war jobs, not always because of better money but because of reasons of dissatisfaction with things as they were.

Better retailing conditions, Smith believed, will open up the field again to many of these—ex-soldiers, ex-war workers, and ex-dealers alike. Often those who left one manufacturer prove capable men under new conditions. It is up to their new companies only to be aware of what the trouble was before and work against its happening again.

All of these men must be trained again, however, he pointed out. Even dealers who remained dealers during the war need re-acquaintance with the fundamentals of the system, and posting on what's new.

The wide-awake manufacturer is planning in anticipation of these things, Smith declared. He will encourage dealers to invest their own money, because a man works even harder to protect his personal possessions.

He will study all the more faithfully, for the same reason, to learn the fundamentals of successful layout and display, advertising, salesmanship and sales managership, cash and collection policies. The manufacturer will assume responsibility for this training, Smith predicted.

BUILDING COMPLETELY

The utility's participation in such a program was suggested by M. E. Skinner, vice president of Buffalo Niagara & Eastern Power Corp. in his talk on the electric home of tomorrow.

Starting from the premise that the sooner a house has its necessary appliances, the sooner the utility gains a full-load customer, he outlined a working plan for getting the all-electric home under way from the beginning.

The eventual tenant of a house usually is not the one who decides what is installed as the house is built, Skinner pointed out; 85% of the time it is the speculative builder, who finishes the house and then sells it to a buyer who sees what he is getting, rather than blueprints.

As a rule a complete array of appliances is not included, because custom has not established that habit, and the builder sees no reason for suggesting it because it would immediately add several hundred dollars to the cost price. His chief consideration is quick profit.

The only way to persuade him to add the appliances to the home he is selling, Skinner reasoned, is to build up a public demand for such features and to convince the speculative builder that there is a greater profit to be made. The appliance dealer would benefit through quicker

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EEI Meetings Discuss Cooperation With Postwar Appliance Dealers

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turnover and less selling cost to himself.

All of this hinges upon a created public demand for appliances already in a new house, Skinner reminded his listeners, and that is where the utilities carry the ball. They are best equipped to launch such a campaign in the community, and to follow through until it is established.

The campaign would have to hinge upon a visual emblem that would show when a new home measured up to the desired requirements. He suggested a banner, perhaps carrying a star for each of the approved facilities of adequate wiring, better-light better-sight standards of lighting equipment, fully electric kitchen, automatic laundry, and air conditioning.

LOCAL QUALIFYING STANDARDS

The program would be maintained through local qualifying standards, with public education toward a demand for the improvements represented and toward recognition of the emblem shown.

Manufacturers and utilities, however, Skinner stated, would have to do the major work in getting such programs under way. Local dealers seldom have the money or the facilities. Local banks also would tie in, setting up terms the average prospective homeowner could meet.

Meanwhile the EEI Training Committee is working toward better methods of approach to postwar market problems, revealed C. E. Greenwood, commercial secretary of the Institute, and its findings will be released to the industry as a whole.

His statement is characteristic of the general feeling evidenced by both utilities and manufacturers at the meetings—that they are not waiting for reassurance from outside, but going ahead with postwar plans that will apply for all.

The success of their plans, it was taken for granted, will depend upon their ability to work it out together.

As a result, he predicted, furniture retailers working with EEI, the American Gas Assn., and their own association will be an important factor in appliance retailing after the war.

Hardware retailers have sized up the market in much the same light, Mr. Peterson said. Most of them carried small appliances before the war. Some 75% of them sold electric washers; 50% handled electric refrigerators. They intend to increase their appliance business.

DEMAND HAS INCREASED

Their reasons have been built up gradually, he believed, over the past five years. For one thing, the war had made them conscious of increased demand. He quoted the figures of a recent survey taken by the U. S. Chamber of Commerce of consumer demands for the first six postwar months:

1,715,000 refrigerators
1,435,000 stoves
1,330,000 radios
1,260,000 washing machines
1,015,000 hand irons.

In the background, but equally responsible for their more confident outlook, he said, are factors of greater manufacturers' and utilities's cooperation, and of better organization within their own ranks. Altogether, they add up to greater participation by hardware dealers in the postwar appliance market.

Rau, Peterson See Appliance Increase In Furniture and Hardware Outlets

CHICAGO — Furniture stores and hardware outlets both will play an increased part in postwar appliance retailing, according to two men well qualified to speak for their respective industries.

The more than 600 representatives of the appliance manufacturing and utility industries who attended the Edison Electric Institute's eleventh annual commercial meetings in Chicago April 3-5 heard Roscoe Rau, of Chicago's National Retail Furniture Assn., and Rivers Peterson, of Indianapolis' National Retail Hardware Assn., agree upon that statement.

FURNITURE MEN'S ATTITUDE

Furniture men have always carried smaller appliances, he pointed out, but problems of servicing, instalment paper (especially 3-year and 5-year terms), and lack of organized planning with manufacturers have kept them from expressing wholesale endorsement of handling major appliances.

Furniture men, the first retailers to extend instalment terms to the public, have always been against long terms, Mr. Rau said, and will continue to be, in his opinion.

Nevertheless, he said, they are overwhelmingly in favor of carrying major appliance lines, and will work with their banks to follow out whatever terms the postwar market establishes.

THINKING IS CHANGED

War conditions have modified their thinking, he believed. And the majority of them, according to recent surveys within the trade, think that well rounded appliance lines logically fit in with furniture retailing.

Utility cooperation to a greater degree was evidenced in discussions at the January national furniture meetings in Chicago, he recalled (AIR CONDITIONING & REFRIGERATION NEWS, Jan. 31, 1944).

McCarthy Heads New Chicago Bendix Unit, But Change in Branch Policy is Denied

SOUTH BEND, Ind.—A. L. McCarthy has been appointed manager of the newly established Chicago branch of Bendix Home Appliances, Inc.

Mr. McCarthy was formerly manager of the Detroit Bendix home appliance branch, which has since been changed to an independent distributor. Before that he was general sales manager of Eureka Vacuum Cleaner Co.

"The establishment of the Chicago branch does not in any way change the announced policy of the company," Mr. Sayre stated today. "We shall continue our policy of dealing through independent distributors. We have only two factory branches—Chicago and Cleveland.

"In the case of Chicago, we felt that we not only wanted more business from that territory, but also we want to experiment on plans and programs. The latter will call for expenditures of time and money which we could not fairly ask a distributor to make.

"We will work closely together to prepare the most effective plans for the distributors and dealers."

The Chicago offices of Bendix will open April 15 at 1746 American Furniture Mart.

First Postwar Radios to Established Dealers, Emerson Executive Believes

NEW YORK CITY — During the immediate postwar period, when demand will greatly exceed supply, available radios should be restricted to established dealer channels, it was advocated by Charles Robbins, vice president of the Emerson Radio and Phonograph Corp., in a recent statement to the press.

Robbins pointed out that both manufacturers and retailers of radios and electrical appliances face a paradoxical situation generated by the heavily publicized pent-up demand for this merchandise which has attracted a multitude of prospective dealers, many in unrelated fields.

INDUSTRY FACES QUESTION

"In view of this," he said, "the industry has thrust upon it the question of whether to take on new dealers for the immediate postwar period or temporarily restrict the available merchandise to those dealers who have done yeoman work all through the war period in radio repair and maintenance.

"With the strong probability that radio set production will be limited or restricted for the immediate postwar period by government regulations, the thousands of old-line radio retailers will be 'shorted' on the quantity of sets they will require. The injection into the retail setup of many newcomers to the business can result only in still further diminishing the number of sets available per dealer. Should this be permitted?"

The government is coping with an analogous situation in the case of manufacturing industry, Robbins noted, with one school of thought contending that critical materials should not be made available for civilian production to such companies as were not identified with and actively engaged in that industry in 1940.

"Perhaps the radio industry," the Emerson executive said, "should follow through on this principle in arriving at its own modus operandi on the dealer question. Who, in the interim period of limited production, more deservedly should have the cooperation of manufacturers and distributors than those dealers who aided in the distribution of radio merchandise before the war?

THE PROPER TIME

"I do not mean to infer that the radio industry should be opposed to free enterprise, but, on the contrary, I believe it should encourage it at the proper time. But the proper time would not be immediately after civilian radio sets again are manufactured. In that period, when demand will greatly exceed supply, available radios should be channeled to those dealers who have had a stake in this business for many years and who, during the war, have performed worthwhile service in keeping radio sets in use."

Attack WPB Labor Directive as Curb On Civilian Goods

(Concluded from Page 1, Column 4)

production involving manufacturers in these two labor areas be reviewed to bring them in line.

Objectors to the directive cited several weaknesses in the order. Civilian goods programs in other areas would be unintentionally hit by the directive because components for these products are largely made in Group 1 and 2 areas, they said.

No allowance is made by the directive for cutbacks in war orders in these labor areas, it was also pointed out, so that a plant which lost a war contract would be prohibited, in effect, from turning to the production of civilian items.

Limiting production to first quarter allocations or actual first quarter production (whichever is the smaller) is unfair, some officials said, because numerous plants received allocations for that quarter but were unable, due to one cause or another, to produce all the allotment.

The directive also makes no provision for plants staffed mostly by women, who cannot be drafted and who are generally reluctant to move to other areas.

Electric range production will probably be cut if the directive is allowed to stand as is, industry spokesman say. It was expected that the current program of 68,000 units a year would be increased in June to 88,000, but this seems unlikely now in view of this order.

Revisions Made In Regulation 9A To Restrict Use of AA-3 Rating

(Continued from Page 1, Column 3)

basis without the use of ratings, and, therefore, a repairman does not need a rating to get his fair share.

The amendment modifies the forms of controlled materials which may be purchased by repairmen under the procedure to conform them to the recent revision in controlled materials designations under Schedule I to CMP Regulation No. 1

Interpretation No. 2 to CMP Regulation No. 9A, announced at the same time, points out that distributors who sell copper tubing to automotive, heating, and refrigeration repairmen, under provisions of Direction No. 1 to CMP Regulation No. 9A, must know, or reasonably believe that his customer is such a repairman.

This rule holds despite the fact that distributors who receive orders under CMP Regulation No. 9A generally are not required to find out whether their customers are complying with the Regulation.

The Interpretation also points out that in some cases distributors will receive both the maintenance, repair, and operating supplies (MRO) and the V-3 symbol on purchase orders from the same customer. In such cases, unless he knows or has reason to believe that his customer does not have the right to use both symbols, the distributor may rely on his customers certification that he does.

The amended CMP Regulation 9A includes the following changes:

Paragraph (a), which explains "what repairmen can buy materials and parts under this regulation," has been revised by the addition of the following sentence: **"It also includes persons who recondition or rebuild damaged or used items for resale."**

To Paragraph (e) "What kind of work a repairman may do with materials or parts bought under this regulation" has been added this section:

"A repairman may use what he buys under this regulation to recondition or rebuild a damaged or used item which he plans to sell, but he may not use it to replace material or parts which are still usable, nor to replace material or parts solely to improve it from its original design."

Repairmen are prohibited from using the AA-3 rating assigned by the regulation for certain items as listed in the following paragraph:

"(g-1) **Certain items may not be rated by a repairman. No repairman may use the AA-3 rating assigned by this regulation to buy any of the following items. These items are made available to repairmen and retailers on a pro-rata basis without the use of ratings, and a repairman does not need a rating to get his fair share.**

"The following radio repair items: capacitors (CMP Code No. 500), microphones and loudspeakers (CMP Code No. 505), resistors (CMP Code No. 506), transformers (CMP Code No. 510), tubes (CMP Code No. 511), paint."

Interpretation 2, issued at the same time as the amended regulation, is as follows:

RESPONSIBILITIES OF DISTRIBUTORS OF MATERIALS AND PARTS TO REPAIRMEN

(a) A distributor who receives an order under CMP Regulation No. 9A is entitled to rely upon the customer's certification that he is entitled to place the order, and is not required to find out whether his customer is complying with the regulation, unless he knows or reasonably believes otherwise. However, in the case of copper tubing which a distributor bought under Direction 1, the distributor must know or reasonably believe that his customer is a refrigeration, automotive, or gas or oil burner repairman. If he delivers materials or parts under those circumstances in good faith, he is not responsible even though in fact his customer was not entiled to buy the materials or parts, or used them to do work not permitted by paragraph (e) of the regulation .

(b) Sometimes a distributor will receive both MRO orders and V-3 orders from the same customer. Paragraph (g-1) of CMP Regulation 5, and paragraph (c) (2) of CMP Regulation 9A, allow a repairman to use his customer's MRO symbol and rating to get materials needed for repair, in addition to materials bought with the rating and symbol assigned by CMP Regulation 9A. Hence, unless he knows or has reason to believe that his customer does not have the right to use both symbols and the related preference ratings, the distributor may rely upon the customer's certification that he is entitled to use them.

Seek Proper Application For New Locker Plants

(Concluded from Page 1, Column 2)

evaporator, and parts) is more than $5,000. Application for the whole project, including the refrigeration system is made on Form WPB-617 under these conditions.

Form WPB-2449 is to be used in all other cases. When application is made on Form WPB-2449, the application is made to, and processed by, the nearest WPB regional office.

When Form WPB-2449 is used and the applicant requests processing equipment items such as grinders, power saws, etc., they must file for each item on Form WPB-3155.

Utility forms must be filed where a new connection is necessary (including gas, electricity, water, and steam heat). The forms should be available from the local utility.

One original and two copies (3) of WPB Form 2581 are required where priorities are requested on scales.

Area production urgency committee concurrence must be received in the three Pacific Coast states; and the Akron, Detroit, and Hartford areas.

Also necessary are the required lists containing the names and addresses of those renting lockers, as well as the amount of money paid by each family on the list, and a statement from the bank or other responsible agency certifying it is holding in escrow the actual cash for the families listed.

Revised Memo 115 Is Aid to 'Over-30' Men

(Concluded from Page 1, Column 2)

ployer on Form 42-A for a refrigeration repairman be thoroughly reviewed.

"Care should be taken to establish (a) the critical shortage of skilled repairmen in the area, (b) the training and skill required for the work, (c) the number of installations maintained by the repairman, particularly in hospitals, food storage places, and restaurants and cafeterias largely used by war workers, and (d) efforts made to train unskilled workers or to secure skilled workers through the USES and other sources.

"If it appears that these points have not been fully stated, it is suggested that a supplementary statement be filed with the local board."

It was further suggested that the employer can request reconsideration by the local board of the previous action taken in view of the new Selective Service policy outlined in Memorandum 115. If the local board refuses to change its position, a new appeal should be addressed to the State Director of Selective Service, such an appeal to be accompanied by full information on the shortage of repairmen in the area served.

Assistance can be obtained from the Office of Civilian Requirements representative, of which there is one in every WPB regional office.

The overall situation, with respect to the draft is generally upon to look something like this:

22 to 26—No deferments for refrigeration servicemen.

26 to 30—Considerable tightening up after the 22-26 age group is depleted. Some doubt as to whether the same small list of deferrable activities will hold good for this group.

30 and over—Any repairman in this age group should have an excellent chance of staying at his job.

Servel's Electric Division Names Sales Chiefs

(Continued from Page 1, Column 3)

manufacturing facilities, it was said. Servel also plans to increase its sales department personnel to give greater field coverage, reported Mr. Jones.

Mr. Aulsebrook, who started with Servel as service manager of the Rocky Mountain division in 1926 and who has been assistant sales manager of the Electric Refrigeration Division for several years, will have charge of the home office, contracts, sales promotion, and general internal activities.

Mr. Bell, new assistant sales manager, was formerly eastern district manager. He joined Servel in 1936 after several years with the company's Boston distributor. In his new post he will supervise activities of field sales personnel.

Mr. Olin, who has also been promoted to assistant sales manager, has for some time been manager of western national accounts. He will continue with this work, assume responsibility for industry association work, and correlate contacts between sales and engineering.

'2% Profit Ceiling' On Consumer Goods Alarms Congress

WASHINGTON, D. C. — Has an arbitrary profit ceiling on the production of civilian goods been established or is such a move planned by the Office of Economic Administration?

The "2% profit directive" issued last November by Fred M. Vinson, stabilization director, has created "widespread apprehension" among manufacturers, says Lyle H. Boren, Democratic member of the House Committee on Interstate and Foreign Commerce, who asks that the directive be published.

"Judge Vinson says that his 2% profit maximum shall apply only to consumer goods that will be produced under mandatory WPB programs," reports Representative Boren, referring to a letter he had received from Mr. Vinson. "But how do we know that all consumer durable goods will not be covered by such mandatory programs? Is it not likely that, to facilitate reconversion, WPB will prepare many such programs, so that the 2% price rule might be universally applied?"

That the 2% directive applied only to textile and apparel manufacturers producing under orders from the WPB was stated in the letter from Mr. Vinson who explained that the 2% profit margin "was recommended in light of the fact that most of the items which such mandatory controls were contemplated have been manufactured in peacetime at a very small profit margin. Furthermore, it must be remembered that, irrespective of adjustments allowed for individual items, all price ceilings are still subject to the requirements of the law that they be 'generally fair and equitable.' The margin allowed under my directive is a margin over and above any legal requirement which is applicable to the industry generally, and is designed to afford additional protection to the individual producer and the individual item.

"The directive of Nov. 16, as amended," explained Mr. Vinson, "applies only to those who are covered by it, and in no case is it applicable except to manufacturers required by the WPB to produce specific items. I do not assume that the reconversion program for consumer durable goods will be operated under any such mandatory basis.

"The situation in each industry will be considered in light of its historic situation and in light of the margin of profit generally prevailing during representative peacetime years in that particular industry and for that particular item," added Mr. Vinson.

Remen Manages Ward's Plumbing, Heating Div.

CHICAGO—I. M. Remen has been appointed manager of the Plumbing and Heating Division of Montgomery Ward & Co., it was announced here recently. Mr. Remen has been with the company for 18 months, during which time he has been the regional supervisor of plumbing and heating in Ward's retail stores in the Chicago district.

District Sales Head

E. J. BAUGHMAN

Has been placed in charge of all Hotpoint sales in the Los Angeles district.

* * *

Baughman Named to Coast Sales Post

CHICAGO—E. J. Baughman, formerly sales specialist for Hotpoint on the Pacific Coast, has been appointed Los Angeles district sales manager, according to G. H. Smith, general sales manager of Edison General Electric Appliance Co., Inc.

Mr. Baughman is a native of California, and a graduate engineer of Stanford university. Following years of experience as mechanical, civil and radio engineer and laboratory technician, Mr. Baughman spent 10 years as appliance salesman throughout the Pacific Coast states.

Achtenhagen Purchases Denver Distributorship

DENVER—O. F. (Jerry) Achtenhagen, for the past two years general manager of the Philco Training School, Philadelphia, has purchased the Radio & Appliance Distributing Co. of Denver, a long-established Philco distributor serving the Colorado area.

The new president and owner of Radio & Appliance Distributing Co. will keep the company name, take over all assets and occupy the same building at 1708 Sixteenth St., Denver.

Mr. Achtenhagen has a background of 25 years of active merchandising experience. In 1928 he entered the automobile radio business with the Transitone Automobile Radio Corp., and in 1931, when Philco acquired that company, Mr. Achtenhagen became one of its field representatives, introducing Philco automobile radios throughout the entire western part of the United States. In 1935 he became sales manager of the Philco Automobile Radio Division, Detroit. Since the outbreak of the war, he has been general manager of the Philco training school, which has trained and graduated over 12,000 advanced radio technicians for the Army and Navy.

Self-Propelled Army Barges Fitted With Refrigerator Units

YORK, Pa.—The nation's newest and fastest type ship for landing infantry and mechanized equipment, will be outfitted with refrigeration by the York Corp., company engineers have announced.

Refrigerating equipment for meat and vegetable compartments will be installed on two types of self-propelled barges, the LSM (landing ship mechanized) and the LCI-L (landing craft infantry-large).

Not yet in service, the LSM was created to provide for speed in transporting infantry for landing operations. One of the fastest of all such vessels, it will weigh several hundred tons and have a trans-oceanic cruising range. Tremendous deck area and a minimum of superstructure make the LSM ideally suited for carrying in addition to troops cargoes of tanks, planes, and other mechanized equipment. The LCI's which will also be equipped with refrigeration, range in size from 100 to 200 feet and are mainly used to transport foot troops.

4th Service Command Group in Discussion Of Refrigeration

CAMP GORDON, Ga.—To familiarize men with the different types and with the maintenance of refrigeration, air conditioning, and ventilation equipment on an army post, a three-day conference was held here recently. Members of 27 posts in the Fourth Service Command attended.

Most critical of the problems in refrigeration is the shortage of "Freon" gas, it was reported. Numerous new war plants have used much of the available supplies of "Freon." Because of the possible further shortages, members of the conference discussed the advisability of confining the refrigeration systems at army camps to methyl chloride systems.

One of the reasons for holding the conference here is that the post is equipped with all types of refrigerators from the small domestic types to the huge plants known as CS 30s, where large stocks of food supplies are kept.

In the huge cold storage plant here the buildings are divided off into rooms where the temperature is maintained at a prescribed level. With the exception of the 10° F. rooms where eggs, butter, and yeast are stored, the temperature is maintained by refrigerator compressors. Even the issue rooms, where personnel from unit mess halls receive their rations, are kept at a cool, even temperature.

Pointed out to the men at the conference was the importance not only of maintenance but of preventive maintenance. By checking at regular intervals the equipment in the large plants and that of the small units there will be no loss of machinery or food, it was shown.

J. V. Poujade, Chief of the Refrigeration, Air Conditioning and Ventilation Units from Atlanta, Ga., explained a number of new devices used in the solution of refrigeration problems.

Ramsey-Bennett New Cleveland Firm Name

CLEVELAND — Ramsey Brothers Co., distributor of General Electric products, has changed its trade style to Ramsey-Bennett Co., according to Fred T. Ramsey, partner and general manager of the company.

The change was made to honor R. W. Bennett, who has been a full partner since the company's inception. No other changes in the company organization are involved.

Jobbers Survey Refutes WPB Claim That All Parts Requests Are Filled

Danger Seen as Suppliers Face Coming Peak Season With Depleted Inventories

CHICAGO — Statement of WPB officials that all demands for repair parts for essential civilian repair parts are being filled is not born out in a survey just completed by the National Refrigeration Supply Jobbers Association, organization which supplies parts for both household and commercial refrigerating equipment.

The survey showed that the parts jobbers haven't received anything like the amount of supplies requested, and further that with the rush season approaching America's refrigeration equipment is threatened with breakdowns on a wholesale scale.

In view of the survey findings, the jobbers request that more materials be given to refrigeration parts manufacturers so that production can be increased, and that WPB should liberalize its allotments to jobbers, particularly in the matter of WPB-547 applications.

Following is the text of the report on the survey:

* * *

This report is based on a questionnaire sent by the National Refrigeration Supply Jobbers Association to its one hundred and twenty-three members on March 29, 1944. Sixty-two answered questionnaires were received up to April 10, 1944.

The questions contained in the questionnaire and a tabulation of the answers received to each question are quoted separtely in this report and are followed by comment on the information disclosed.

In the letter to members that accompanied the questionnaire, the following statement was made:

"Estimates should be conservative so that the Association cannot be accused of exaggeration."

This fact is mentioned as it may affect the weight to be given to the information obtained by the survey.

The questions and tabulations of answers received are as follows:

Question No. 1—"On your January and February WPB-547 (PD-1X) applications have the quantities you applied for ever been reduced by WPB?"

Answer—43 Yes. 19 No.

"In how many instances?"

Answer—From all to one.

Comment—Most of those who answered "no" were the smaller jobbers whose requirements are more easily filled. The second part of this question "In how many instances?" showed a great variety of answers. 10 said "all." 18 said less than 10 instances. 9 said over 10 instances. Several failed to answer the question. 19 said none.

Question No. 2—"In your opinion were these reductions in the quantity justifiable after considering your seasonal demands?"

Answer—34 No. 19, no answer. 9 Possibly.

Big Percentage Declare Inventories Inadequate

Question No. 3—"Is your present inventory of parts plus anticipated second quarter deliveries adequate to take care of your anticipated demand to July 1?"

Answer—For domestic repair, 48 No. 4 Yes. For commercial repair, 47 No. 5 Yes.

Comment—Replies indicate that present inventories plus anticipated deliveries are wholly inadequate for the present and near future demand for both domestic and commercial replacement parts.

Question No. 4—"If your answer to Question 3 is "no," please list the 10 repair part items most acutely short on which relief is imperative. Please be specific—name of part and make."

Answer—(List of items is given at end of the survey. This list lists the items reported and the number of members reporting each item.)

Comment—The items listed are those indicated by the members as those which they need most badly and the number of members listing each item.

Question No. 5—"What percentage of your 1943 total sales was done in May, June, and July?"

Answer—54 replies average 34.9%.

Comment—This means that larger allotments to both manufacturers and supply jobbers must be made. It confirms an already old story that as the weather turns warmer the demand increases. This is not a weighted average and since most replies were received from the temperate zone, it is probable that the third quarter will show somewhat the same average.

How Adequate Supplies Would Aid Repairmen

Question No. 6—"If you had adequate inventories, would this represent a saving in time for your repairmen customers?"

Answer—55 Yes.

"If 'yes,' what percentage of his working time would you conservatively estimate on the average would be saved?"

Answer—22.9%.

Comment—Everyone seems to think that the average repair man will save considerable time if parts and supplies are more readily available. The estimates of time thus saved averaged 22.9%. The WMC estimates only 5,000 refrigeration repairmen are now in the field as against over 20,000 in peace times. The shortage certainly is very critical, and the threat to public health as a result of a breakdown in food storage facilities is imminent.

But if parts and supplies were more freely available, there would be more man-hours left for actual repair work—less time would be wasted in purchasing parts. Since the supply jobbers' estimate is 22.9% time saving on the average, it is possible to provide the equivalent of 1,100 extra repairmen by liberalizing the allocations of materials to parts, manufacturers and removing inventory restrictions, providing higher preference ratings, and larger allotments to supply jobbers.

Question No. 7—"What percentage of his time would you estimate does the average repairman now devote to repairing parts and components which in normal times are discarded and replaced?"

Answer—53 replies average 26.2%.

Comment—This question is also directly tied up with the element of time saving for the refrigerator repairman. Because of existing shortages in controls, expansion valves, compressors, motors, and other components of a refrigeration system the repairman devotes too much of his precious time to tinkering and repairing same.

Repairing Parts Formerly Junked Big Time-Taker

Under normal conditions many of such components are simply replaced and not repaired which saves much time. The defective part was usually scrapped. Under war conditions it seems to be a question of valuable material waste versus critical manpower waste. The War Production Board and other Government agencies can best determine the proper policy.

Let it be said, however, that a plentiful supply of such components for replacement will go far towards providing vitally needed man hours in actual field refrigeration repair.

Only the most experienced and proficient men are capable of repairing such components—and then their work is often wasted by other failures in such parts. Freeing the time of these repairmen so that more owners of refrigeration equipment may have their services would be a tremendous contribution to the health, welfare, and economy of the nation.

A sales and stock trend survey made by N.R.S.J.A. for February showed that there was an increase in sales of parts and supplies of 65.01%

(Concluded on Page 7, Column 1)

More Materials For Producers and Larger Quantities For Suppliers Sought

(Concluded from Page 6, Column 5)

for the first two months of 1944 over the same period in 1943, and that inventories decreased 3.85%. This would indicate that stocks are probably at their lowest point in recent years and demand is increased.

Jobbers Group Offers A Specific Program

We believe that:—

1. WPB must concern itself with this problem as one which is vital to all the people including refrigeration used by the Armed Forces and in industrial plants.
2. WPB should provide more materials to refrigeration parts' manufacturers and in addition endeavor to persuade manufacturers to increase their production.
3. WPB should provide higher ratings on WPB-547 applications to refrigeration parts' jobbers.
4. WPB should liberalize their policy in limiting quantities allocated to jobbers, who apply for ratings on WPB-547 applications.

National Refrigeration Supply Jobbers Association

* * *

LIST OF CRITICALLY NEEDED ITEMS FOR COMMERCIAL AND DOMESTIC REPAIR

Item	No. of Members Reporting Need Com.	Dom.
Bellows		1
Belts	24	22
Blades, Fan	1	
Brushes		2
Capacitors	2	8
Carbon Tet.	5	3
Carrene		1
Charging Lines	1	1
Coils	9	2
Compressors	11	10
Compressor Bodies	7	9
Compressor Parts	21	28
Compressor Valves	3	
Condensers	7	6
Condensing Units	5	2
Controls	44	32
Cooler Parts	1	1
Cylinders	7	3
Dehydrators	19	8
Driers	13	15
Evaporators	2	25
Expansion Valves	27	26
Fans	2	4
Filters	2	
Fittings	23	12
"Freon"	27	14
Fuses	3	3
Gasket Material	2	
Gaskets	29	32
Gauges	17	11
Hand Valves	3	1
Hardware, Replacement Cabinet	3	8
Heat Exchangers	1	
Hermetic Kits		5
Hi-Side Floats	1	11
Float Valve Parts		1
Leak Detectors	5	2
Line Valves	3	2
Motors	19	17
Motor Bearings and Parts	1	4
Oil Separators	1	1
Packless Valves	1	
Pocket Therm.	1	1
Power Elements		1
Prest-o-Lite Equip.	5	1
Pulleys	4	8
Relays	1	2
Relief Valves	2	
Replacement Bodies	1	1
Replacement Parts, Reeds, Pins, Piston	10	13
Rods, Conn.	1	
Seals	3	3
Shut-Off Valves	6	
Solder (95/5)	2	1
Solenoid Valves	6	
Strainers	13	8
Switches, Starting	2	2
Tank Serv. Valves	1	
Thermostatic Valves	11	
Thermostats	1	7
Tools	32	27
Tubing	4	1
Valve Plates	3	6
Valves	4	2
Water Valves	17	2

Peirce-Phelps Will Handle Carrier Line

PHILADELPHIA — Peirce-Phelps, Inc. has been named distributor for the Philadelphia area for Carrier air conditioning and commercial refrigeration equipment, including locker storage plants.

The new distributor is expanding its present staff of 90 persons in order to accommodate the additional business the appointment will bring, and to offer a comprehensive merchandising, engineering, installing, and servicing program on Carrier products.

Display offices and warehouse of Peirce-Phelps, who is a wholesaler, are at 437-451 North Fifth St., Philadelphia. The company has been a distributor of electrical apparatus, and heating and air conditioning equipment since 1926.

Peirce-Phelps officers and founders are: Wilmot G. Peirce, president; J. Trevor Peirce, vice president in charge of sales; and Charles M. Phelps, secretary and treasurer.

Stuart of Carrier To Join WPB Division

SYRACUSE, N. Y.—C. M. Stuart, staff assistant to the president of Carrier Corp., has been granted a leave of absence to become Deputy Chief of the Special Equipment Branch, General Industrial Equipment Division, Office of Operations of the War Production Board.

The Refrigeration and Air Conditioning Section is in this Branch.

No New Radical Designs, Continued High Prices, Are Foreseen By Andrews

(Concluded from Page 1)

The prospect for 1944, he said, thus will be limited to a restricted number of small appliances. A few hand irons and clocks have been authorized, but even partial production of any of the equally needed larger units is out of the question.

Nor is G-E in any position to bring out any radically new appliances, he added. There is no time to work out new designs or to forge new production tools with the limited trained personnel that can be retained. His own hope, he said, is for 1942's lines as soon as possible, and in fewer models.

Prices will remain high for some time, he predicted. Materials and labor costs probably will stay where they are at least until the conditions of peacetime balance and economy have been regained.

Eventually, of course, he said, prices will come down. And not at the expense of improved wage scales, either. He pointed to the 12 years between 1929 and 1941, when prices declined 14% even though wages increased 30% throughout industry as a whole.

During that time refrigerators came down 47%, he tabulated, washers dropped 30%, and ranges 14%. As production picks up and flows into the national demand for all-electric kitchens, he believed, the same thing will happen again.

The market itself is tremendously big, Mr. Andrews pointed out. He presented the following charted figures:

Equipment	Number of Homes	% of Total
Wood stoves	8,000,000	23.0
Coal or coke	4,000,000	11.5
Gas or kerosene	3,500,000	9.7
Electric ranges	1,800,000	5.4

The building trades will be especially active after the war, he believed. Recent surveys have pointed to a postwar building prospect of 1 million homes a year for the first five postwar years, and the steady advertising given to the all-electric kitchen during present times will, he thought, pay big dividends in terms of that expansion.

Financing and mortgaging will necessarily be part of the program, he pointed out, and local banks and speculative builders, by making all appliances installed as part of the postwar home a possibility, will do much to forward the public acceptance of the idea.

The manufacturer's part in the plan most of all is one of getting tools, personnel, and production activity under way, Mr. Andrews said. The appliances produced, if necessarily high in price at first, will increase the utility's load as they come down in cost figures.

The utility's part, as he saw it, will be one of working with the manufacturer and local dealer to analyze local conditions, promote increased power consumption, and offer cooperation wherever the dealer himself feels willing but not completely able to follow through.

Inside Dope

By George F. Taubeneck

(Concluded from Page 1, Column 1)
000,000 more acres this year than they planted last. The number of livestock and poultry now being fed is the greatest on record. Eggs are in embarrassing superabundance.

Winter vegetables produced exceeded anything ever known before.

The result is that available storage facilities, both here and in Britain—which is said to have truly astronomical food stocks in storage—are bursting at the seams. Food is spoiling everywhere, and city people are scandalized at news that perishable foods are being destroyed at city incinerators.

Food administrators are caught on the horns of a dilemma. They want enormous stocks of food for distribution to the peoples of reconquered areas. They want production to go higher and higher for that reason. Yet they have more than they can use now. They don't want to release too much to the public "lest the people think the war is about over."

Refrigeration men could give them one simple answer: more refrigerated storage space. Will Marvin Jones get behind a move toward the production of more refrigeration equipment for this purpose?

War of Nerves

Ungracefully this department is budgeting to pay off a few bets on the termination of the war with Germany. Toward the end of last year we heard from "sources close to the throne" that everything was set for the invasion of Continental Europe, that it would get off around the first of the year, and that it would take about three months to finish the job.

So our bets were placed with a month prudently added, giving us until the end of April to collect. That time is nearly at hand, and we're getting ready to pay off.

About five weeks ago those same sources were confidentially tipping off a few intimates that the Invasion had been postponed until October. And just a few days ago word came that the Invasion has been postponed indefinitely, that it "may never come off at all."

All of which indicates that someone has been taking a lot of us for a ride, as part of a well-planned scheme in the "war of nerves." We have no faith whatsoever in the latter two "tips," nor should you, when you hear them. The probability is that nobody knows the date of the Invasion except Eisenhower, and probably even he hasn't decided yet.

Selective Service

Part of the same parcel is the Selective Service uncertainty. Last month editors were told grimly that every able-bodied man between 18 and 38 "not certified as indispensable to war production by the Army or Navy" would be in uniform by the end of summer.

Now the word is that very few men over 30 will be called the remainder of the year, if at all. Boy, pass the strait-jacket!

(Which reminds us of the card-advertisement in a restaurant window: "Boy Wanted. Must be over 45 years old").

Frank Gervasi

A.S.R.E. members who attended the last annual meeting in New York City will remember Frank Gervasi, foreign correspondent of Collier's magazine, who made their hair and hackles stand on end.

Well, Frank was in Detroit the other day, and he gave an audience of industrialists at the Detroit Athletic Club a double dose of his devasting demagogy.

Frank, who is just back from the Mediterranean, had this interesting explanation of why Stalin so surprisingly recognized Badoglio: It was a trade with Churchill: Badoglio for Tito.

England had been backing King Peter and Mihailovitch in Yugoslavia; Russia backed Tito and his Partisans. In return for yielding Yugoslavia to Stalin and the Russian sphere of influence, Uncle Joe gave Italy to England and recognized Churchill's man Badoglio.

The Collier's associate editor evoked considerable resentment here in Detroit by claiming that Allied materiel was not always so good as Germany's. He really stirred up the boys, just as he did in New York when he left the refrigerating engineers gasping.

German Freezer

Goebbels came up with a new rumor of a Nazi secret weapon the other day which evoked some hearty guffaws from refrigeration engineers around here.

According to the rumor, the new secret weapon is a projectile charged with some chemical compound which will freeze everything within a radius of 500 yards from the spot of explosion. The surrounding atmosphere, according to the claim, would drop immediately to 332 degrees below zero!

Refrigerator Cars

During the remainder of this year the Pacific Fruit Express Co. will spend nearly $15,000,000 for new refrigerator cars and repairs to old ones, reports A. R. Malcolm, agent for the Union Pacific Railroad.

The U.P. shares ownership of the Pacific Fruit Express Co. with the Southern Pacific Railroad.

Recruit 4-Fs As Service Men

That war-of-nerves drive to force 4-Fs into essential jobs could work to the advantage of the refrigeration industry.

General Hershey has announced that all 4-Fs and 1-A-Ls (accepted for limited service) will be immediately reclassified into 2-A or 2-B if they will take jobs listed as essential.

Inasmuch as refrigeration repair men are not only "essential" but on the present "critical" list as well, here is a source of manpower which those attempting to recruit trainees for refrigeration service work should not overlook.

Refrigeration in Italy

Writing from the Fifth Army front at Cassino, Detroit News correspondent Blair Moody says that the excellent supply of perishable goods available to the G.I.'s fighting in Italy is the chief source of their high morale. He states:

"One of the real stories of this war is the way meat in huge quantities is being shipped in refrigerator ships from the United States, transferred to refrigerator warehouses in ports and then fanned out over the Army's field area in refrigerator trucks the next day.

"Division quartermasters send their trucks to base shipping points behind the lines, cook the meat, and often serve it the same night, from four to six days a week. In the last week we have had roast beef, pot roast, beef stew, pork chops, and fried chicken in the regular Army messes—all of excellent quality, well cooked, and in abundance."

Tough Problem

The power plant of the world's heaviest, fastest single seat fighting plane (the Thunderbolt P-47) rides on a slender, fragile-appearing tubular section called the engine-mount.

Carrier Corp. and other manufacturers skilled in peacetime welding techniques, were called in to build the mounts. Many relinquished their contracts after repeated rejections of the mounts because of "cracking" during the welding process.

The engine mount of a Thunderbolt must be perfection itself. The least defect in the mount would mean disaster. Racing at more than 400 miles per hour in sub-stratosphere, sub-zero altitudes of 30 to 40 thousand feet, the P-47 is "hotter 'n' a pistol."

Carrier experts decided upon the AC type of welding transformer, with an ionizer attached, in order to accomplish three objectives: simplify the striking of the arc, get rid of the arc blow in tube clusters and tight corners, and control amperage setting.

They found that causes of cracks fell in three categories: first, welding technique; second, contraction and expansion of heavy and light parts welded together; third, temperature and humidity variations in the welding room.

The first difficulty was overcome by instruction (for instance, starting the weld slightly in advance of the bracket and clip to be welded). Contraction and expansion was controlled by pre-heating to approximately 300 degrees. And the last, air conditioning, was no problem for William H. Irwin, Carrier's aviation superintendent.

Shooting Start

Airplane engines are now being started by shotgun shells, believe it or not. Winchester is said to be manufacturing quantities of a special shotshell which provides a single impulse powerful enough to start a huge aircraft engine.

Placed in the starter, the cartridge is fired electrically. When the black powder is ignited, gases are released which explode the starting mechanism into action. Although longer, the starter cartridge looks much like a standard shotgun shell.

Hirsch of Brunner Records Operating Test Data on 'Freon-12' and 'Freon-22'

By S. R. Hirsch, Chief Engineer, Brunner Mfg. Co.

A few weeks ago we released some fundamental data on "Freon-22" and since that time you have published additional facts regarding the design factors that must be considered in connection with the use of this refrigerant. However, there has been an absence of test information covering the comparative performance of "Freon-12" and "Freon-22." I believe data on this point would be informative, not only as regards substitution in existing equipment but for decisions regarding postwar products.

I feel sure many companies are asking themselves, should we use "Freon-22" in place of "Freon-12" for our post war designs? If I make a freezer cabinet, an ice cream cabinet, or any kind of low temperature food display or storage cabinet, should I insist that the manufacturer supply me with a "Freon-22" condensing unt or a "Freon-12" unit? What happens, it might be asked, when "Freon-22" is used in existing "Freon-12" equipment?

To answer these questions, it seems imperative that some manufacturer of condensing units release experimental data to give an answer to these problems. I trust all will appreciate that our only excuse in releasing data is to lead the way to a discussion that will permit a studied review on the part of those who must decide.

HOW TESTS WERE MADE

In order to reach a simple solution to this problem, we set up one of our standard air cooled "Freon-12" models and gave it a calorimeter test. The pulley on the compressor was adjusted so that at 0° F. evaporator temperature the motor was given its maximum load. Tests were then carried on at several temperatures between 0° F. and —40° F. The compressor showed an average speed of 900 r.p.m. during the tests over these temperature ranges.

After this test, the "Freon-12" charge was withdrawn, fresh oil was placed in the crankcase and the same system charged with "Freon-22." Nothing else was disturbed. The pulley on the compressor was again adjusted so that the motor was loaded to the same amount at 0° F. as was done in the previous test. Tests were made again at the same points between 0° F. and —40° F. During these "Freon-22" tests, the compressor was found to be operating at an average speed of 625 r.p.m.

Table I gives a tabluation of the test data for both "Freon-12" and "Freon-22." Before making up this table, all test data was plotted in curve form and the results smoothed to compensate for any slight instrument observation inaccuracies.

It is seen that the watts input to the motor and the capacity of the condensing unit are the same throughout the entire temperature ranges from 0 to —40°. This permits us to definitely state that, from a capacity and wattage standpoint, there is no advantage in using "Freon-22" within these temperature ranges.

WHAT TESTS REVEALED

Any claims for increased volumetric efficiency of the compressor by reason of higher suction pressures are not born out by the facts. This is suspected, however, because volumetric efficiency is not a function of suction pressure alone, but of the ratio of compression. The table shows that, during the course of the test, there is a surprising natural duplication in the compression ratio for both "Freon-22" and "Freon-12."

Theoretically, it was expected that the compressor speed could be reduced approximately 40% when switching from "Freon-12" to "Freon-22." Actually, our tests show that displacement was only reduced 30% from 900 to 625 r.p.m. There is less displacement advantage in favor of "Freon-22" than was expected. There seems no opportunity to reduce compressor size in any important amount and the facts seem to indicate that compressor designs will make "Freon-22" units heavier and probably more costly.

If reference is made to Table I in the column of "Piston Loading," it is seen that the pressure on the piston is high. This affects the size of main bearings, wrist pin, and connecting rod bearings and compressor valve parts. It increases the size of head bolts and for Underwriters Laboratory approval, would mean heavier test pressure, especially for seals which simly upsets, to no advantage, the present satisfactory balance of all these design components.

It is, in our opinion, evident that these facts discredit the use of "Freon-22" as an alternate for "Freon-12" for the ranges shown in Table I, which are well within those of ice cream and freezer cabinet applications, locker plants, and similar installations.

I am sure anyone with a practical knowledge of compressor operation would prefer a unit operating at only 900 r.p.m. against a head pressure of 170 lbs. in preference to one at 625 r.p.m. but against a head pressure of 240 lbs. The heavier pressure is far more destructive to parts than is the higher speed.

Further, the greatest difference in pressure between head and suction with "Freon-22" causes greater leakage and will eventually result in inefficiency. The fact that, theoretically, we should obtain 40% speed reduction, but can only take a 30% advantage points to this very deficiency.

IN OTHER APPLICATIONS

I am prepared to admit that for extremely low temperatures below —40° there might be and probably is an advantage in using "Freon-22," but for such ranges where two-stage operation is generally specified, the application is very special and does not, in general, account for those temperatures in which the majority are interested.

The immediate problem of converting existing systems to "Freon-22" because "Freon-12" is not available is an entirely different matter. It is a decision of expediency only and does not rest on the merits of the case. With such a decision these facts do not contend but, perhaps, here too our data will assist in indicating what can be expected in a comparative way between the performances of "Freon-12" systems converted to "Freon-22."

It would seem to be evident that for air cooled equipment the use of "Freon-22" will place a severe strain on the working parts of any "Freon-12" compressor. In an earlier discussion, it was stated that water cooled units would be aided by lower head pressures and this reasoning still holds true during this situation which necessitates conversion but, irrespective of whether the system is air cooled or water cooled, for new equipment the advantage is with "Freon-12."

Before closing, I might add that in connection with replacement needs, there has been a fear that when "Freon-22" was used, the motor might not have sufficient starting torque to turn the compressor, because of the higher pressure. Actually, when the pulley size is reduced, the improved leverage compensates for higher piston loads at the start.

Again let me repeat that I have no intention of discrediting "Freon-22." It has no thermodynamic deficiency from a purely scientific point of view. It fails practically in ranges from —40° to 0° F. and certainly above when compared with "Freon-12," because of higher operating pressure which is a disadvantage not counter-balanced by the advantage of reduced displacement needs.

Table 1—Comparative Performance Tests Using Same Air-Cooled Condensing Unit and Adjusting Compressor Speed to Give Same Motor Load at 0° F. Evap. Temperature For Both 'Freon-12' and 'Freon-22'

(Tests according to A.S.R.E. Standards, 65° Return Gas)
Ambient Air Temperature 90° F.

Evap. Temp. °F.	Motor Input Watts F12	F22	Capacity B.t.u./hr. F12	F22	R.p.m. F12	F22	Condenser Pressure Gauge lbs./sq." F12	F22	Compression Ratio F12	F22	Piston Loading lbs./sq." F12	F22
0	550	550	2200	2200	900	625	170	240	6.5	6.5	161	216
-10	490	490	1600	1600	900	625	130	215	7.7	7.7	126	199
-20	440	440	1150	1150	900	625	120	205	9.0	9.0	120	195
-30	400	400	750	750	900	625	115	195	10.7	10.7	115	190
-40	375	375	400	400	900	625	114	190	13.5	13.5	114	190

Compressor: 1¼" bore x 1¼" stroke, two cylinder.

Thermostatically Controlled Magnetic Clutch Features New Auto Air Conditioning Patent

DETROIT—Patent for an air conditioning system for postwar automobiles, listed as No. 2,344,864, has been assigned to the Packard Motor Car Co. by Walter R. Griswold.

Designed for use in closed automobile bodies, the apparatus consists of a compressor-condenser-evaporator refrigerating system operated by the automobile engine through a thermostatically controlled magnetic clutch arrangement which starts the machine when the temperature inside the car rises above some predetermined degree of heat. The principal claim in the new development deals with the magnetic clutch.

It was explained that the refrigerating mechanism is to be placed directly behind the rear seat of the car, with the cooling elements directly in front of the automobile's radiator. The cool air outlets are to be behind the rear seat so that the cooled air will circuate upward and toward the front of the car, then downward and rearward beneath the front and rear seats of the car and then back through the cooling and cleaning mechanism.

Proper Odor and Taste of 'Liquid Refreshments' Determined In Air-Controlled Laboratory

LOUISVILLE, Ky. — How refrigeration and air conditioning equipment is being used in the distilling plant of Joseph E. Seagram & Sons, Inc. here was described recently by a Seagram official.

Air conditioning equipment controls temperature and humidity in storage rooms in which are kept, in peacetime, gin ingredients such as Juniper berries, Java coca bean, Jurana root, and other flavoring materials.

Serving the two rooms, each of which measures approximately 30 x 30 feet, is a Carrier Weathermaker supplied with refrigeration by a duplex refrigerating machine.

Another interesting use of refrigerating equipment is in the Psychophysical Laboratory of the Seagram plant where olfactory and gustatory properties of liquids are studied. It has been established by Dr. E. H. Scofield and associates of this laboratory that temperature control is of fundamental importance in the conduct of such investigations.

Samples are maintained at any given temperatures by the circulation of cold water through coils in the flasks from which the experimental samples are dispensed. The cold water is supplied by two water coolers with two condensing units providing the refrigeration. Similar installations are used for the Psychophysical Laboratory in Seagram plants at Delay, Md., and Lawrenceburg, Ind.

11% of Homemakers In Poll Say They Would Buy Air Conditioning

NEW YORK CITY — Eleven per cent of the homemakers recently polled by the "American Home" magazine declared their desire to buy air conditioning units, and 27% are interested in home freezing units, when again available.

"Assuming that the following items were now available to consumers which ones would you buy within the next year?" was asked in the survey. Questions for the poll were submitted by the magazine's advertisers.

Eight items, two of which were the air conditioning unit and the home freezing unit, were listed under this question, and 91% of the voters checked at least two items.

Dumser Heads Chase Pipe Sales Division

WATERBURY, Conn. — John M. Dumser, supervisor of priority and Controlled Materials Plan work for Chase Brass & Copper Co. here, has been named manager of pipe and water tube sales, announces Robert L. Coe, vice president in charge of sales.

Mr. Dumser joined Chase in 1927, starting in the sales and sales promotion departments of the St. Louis branch. In 1940 he was made assistant manager of pipe and water tube sales with headquarters at Waterbury, Conn.

Dehumidifying System Helps To Conquer Rust Problem In Piston Ring Manufacture

HAGERSTOWN, Ind.—Rust, once a major problem in the manufacture of piston rings, has been reduced to the status of a minor problem at the Hagerstown, Ind., plant of the Perfect Circle Co. with the installation of equipment to maintain low humidity air during summer months.

By controlling the humidity of the air, prespiring hands are avoided and excessive, rust-causing moisture is not present to collect on polished surfaces and precision-finished rings.

"It is impossible to give any dollars and cents figures, but it is a fact that after the installation of air conditioning, rust became a minor problem," says W. B. Prosser, manager of the plant.

Two Carrier centrifugal refrigerating machines provide the 3,000 gallons of chilled water per minute used in the air conditioning system.

The piston rings made by Perfect Circle, are used in huge quantities in Wright, Allison, Pratt & Whitney, and Packard built airplane engines.

At the Perfect Circle plant in New Castle, Indiana, a dehumidifier is used to control the moisture content in cupola blast air. The plant engineer states that satisfactory production could not be obtained without use of the dehumidifier.

Marines' Advance Base Radio Trucks Will Be Cooled With 2-Ton Systems

YORK, Pa.—Marine Corps trucks used at advance bases for radio unit work will be air conditioned for protection of men and equipment by a new type portable dehumidifying unit developed in the engineering laboratories of the York Corp., it has been announced.

Designed for a five-ton truck, housing six to seven technicians when in action, the York unit has a refrigerating capacity of over two tons and is driven by a gasoline engine. It will maintain an 80° F. temperature and 50% relative humidity in the conditioned area. The combination of the sun, the electrical equipment in the truck and the body heat of the occupants would raise temperature and moisture to a degree which would impair the working efficiency of the men and equipment unless mechanical cooling and dehumidifying are provided, Corps officials stated.

Each of the units is self-contained, semi-automatic and weighs one ton. It is mounted on its own trailer.

Quartermaster To Have Mobile Laboratory

WASHINGTON, D. C. — An air conditioned mobile food testing laboratory, entirely self-contained and equipped with the newest and most scientific devices for testing and analyzing food products at the source of supply, is being completed by the Quartermaster Corps and will be placed in service before the start of the 1944-45 canning season.

The laboratory will be air conditioned for better control of atmospheric conditions which may prevail during work in the field. Since tests have shown the necessity for very careful handling and processing of several varieties of canned foods to prevent spoilage, particularly when the products are stored under tropical conditions and temperatures, the mobile laboratory will make possible the periodic examination of canned and dehydrated foods and the plants which produce processed foods.

Release of Surplus To Small Plants Sought

WASHINGTON, D. C. — Advocating immediate release of surplus materials to small plants for unrestricted use, Maury Maverick, chairman of the Smaller War Plants Corp., said recently that the corporation is opposed to the allocation of a fixed quota of production based on each firm's prewar production with production limited to prewar firms.

Reports are current that SWPC will continue into the postwar period and become a permanent government agency to help small business. At the present time the corporation is directing war contracts and subcontracts toward smaller firms.

In demanding that the government release surplus materials for small firms, Mr. Maverick reported to Donald M. Nelson, WPB chief, that American labor and materials should not remain idle while wants are unsatisfied.

Information Please!—

Servicemen Reveal Present-Day Problems In Quizzing 'Experts'

Editor's Note: An "Information Please" session of questions-and-answers on technical sessions formed an important part of the recent annual Canadian Refrigeration Conference sponsored by R.S.E.S. chapters in Canada. Herewith are presented some of the questions, together with a summation of the answers made by the board of "experts," which consisted mainly of representatives of American manufacturing firms.

Q. What causes dehydrators to blow apart? This seems to happen particularly in hermetic systems.

A. High head pressures are likely to result in the sealed hermetic unit when air gets into the system, or when there is re-expansion in the compressor because of a plugged capillary tube. Head pressures as high as 1,200 to 1,500 lbs. may develop with the result that the dehydrator is literally torn apart. A relief valve might be answer to this.

Q. In a sub-zero low temperature system, how would the cost of a brine-tank low side setup compare with a direct-expansion evaporator type of system?

A. No comparable figures were available, but the feeling was expressed that since a brine system is "indirect" and adds another step, it would quite likely add to the overall cost.

Use of 'Freon-22' In An Air-Cooled Machine

Q. Can the refrigerant "Freon-22" be used in an air-cooled condensing unit?

A. It probably can, in certain low temperature applications. But it never should be used in such a unit on high temperature applications because of the tremendous head pressures that would develop.

Q. What must be done to change a Temprite liquid cooler from sulphur dioxide to "Freon-12"?

A. This can only be accomplished by sending the unit back to the factory. The unit when using "Freon-12" requires a different type of float assembly and an oil separator.

Q. Can refrigerant flow valves on a system which has been using "Freon-12" be left on that system when it is converted to methyl chloride?

A. Yes, the valves can be left on a system converted to methyl chloride, but certain adjustments must be made to insure the best operation. After adjustments have been made the service man should permit the machine to cycle two or three times to allow for checking the operation.

Maintenance Charge on A Freezer Cabinet

Q. What percentage of the sale price of a low temperature frozen food cabinet should be added for contract installation and service?

A. The consensus of the "experts" seemed to be that a contractor would be foolish to take a maintenance contract on this type of work on a flat fee or percentage basis, because there has not been enough experience with such systems to set up a standard. "Time and material" was recommended as the only safe method for handling work on such systems.

Q. With a fixture temperature of —120° F. what is the proper refrigerant temperature in the evaporator?

A. The recommended temperature differential between the fixture temperature and the evaporator temperature is 5 to 8° F.

Higher Temperatures Okay With Blast Freezing?

Q. Won't fast freezing at 0° F. with a forced-blast system of air circulation produce just as good results as freezing at —20° F. with natural convection?

A. This is a widely debated matter, on which there is as yet little agreement. Much might depend on the product, and other factors. The major purpose of freezing is to preserve the product without changing the form. The method which will best accomplish this is apparently not yet agreed upon.

Q. What happens when "Freon-12" and sulphur dioxide are deliberately mixed?

A. The consensus was that the sulphur dioxide would separate out and would do no particular good.

Q. Does felt when used in a filter have any ill effect upon a refrigeration system?

A. Felt of the all-wool variety apparently has little if any ill effect on a system. It was asserted, however, that lesser grades of felt may tend to dissolve and then clog up the system.

Q. Should you use a float-type refrigerant control with a constant pressure valve instead of a thermal valve in a pipe coil system designed to maintain temperatures of —70° F.?

A. The board of experts recommended an expansion valve type of refrigerant control, pointing out that expansion valves are now in production to handle systems at low temperatures.

Q. What is the result if you convert a "Freon-12" machine to methyl chloride and fail to make any change in the pulley?

A. There will be a loss in capacity, but no serious effect on the system.

Q. To what extent is oil responsible for copper plating in methyl chloride systems?

A. To a considerable extent. One recommendation was that white oils of a good grade are to be preferred over amber oils.

Placement of Valve In Sub-Zero System

Q. Should a thermostatic expansion valve in a low temperature application be installed inside or outside of the room or fixture in which the low temperature condition is being maintained?

A. In general, a valve with a gas-charged element should be installed outside of the cabinet, and a valve with a liquid-charged element should be installed inside the room or fixture.

Q. What kind of cleaning solvent can be used to wash out units?

A. If carbon tetrachloride isn't available, use trichlorethylene, which is as good.

Q. What are the objections to using "Freon-22" in a machine originally designed for "Freon-12"?

A. "Freon-22" is a low boiling point refrigerant designed specifically for low temperature work, and to use it in a unit designed for "Freon-12" results in dangerously high head pressures and the possibility of mechanical failure. Charging a "Freon-12" compressor with "Freon-22" overloads is about 40%, which means that damage can result to the bearings, wristpins, etc. Increasing motor and condenser size is one way of handling it.

Air Conditioning & REFRIGERATION NEWS

Tra le Mark registered U. S. Patent Office;
Established 1926 and registered as
Electric Refrigeration News

F. M. COCKRELL, *Founder*

Published Every Monday by
BUSINESS NEWS PUBLISHING CO.
5229 Cass Ave., Detroit 2, Mich.
Telephone Columbia 4242

Subscription Rates
U. S. and Possessions, Canada, and all countries in the Pan-American Postal Union: $4.00 per year; 2 years for $7.00. All other foreign countries: $6.00 per year. Single copy price, 20 cents. Ten or more copies, 15 cents each; 50 or more copies, 10 cents each. Send remittance with order.

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VOLUME 41, No. 17 SERIAL No. 788
APRIL 24, 1944

Manpower Group Deserves Great Credit

RAY KROMER and his hardworking associates in the National Refrigeration Service Council deserve the highest praise and deepest gratitude from the entire industry for the truly remarkable job they have been doing in their labors to preserve and augment the nation's refrigeration service manpower potential.

Entirely without remuneration or hope of personal reward Mr. Kromer has set about doing the impossible: organizing local groups all over the country to recruit *and train* new refrigeration repairmen during a period of acute labor shortage.

At present more than 70 schools are in being to train more refrigeration service men, and more than 130 local coordinators are at work setting up these programs. The result of their efforts may well save the industry from a widespread series of breakdowns this summer.

SERVICE FACILITY BREAKDOWNS MAY COME ANYWAY

Such breakdowns in service facilities may come anyway, particularly now that refrigeration repair men under 26 cannot be saved from the draft. The breakdowns are likely to be spectacular, affecting hospitals, restaurants and cafeterias, and even war plants. But it is to be hoped that they will be "spotty."

The industry simply cannot sit back and wait for such lapses of service to occur, in the fatuous belief that they will be blamed on the war and "bungling in Washington." Any time a refrigeration system goes out of operation the reputation of both the manufacturer and the dealer who installed it suffer.

That Mr. Kromer has bludgeoned his program through with such enormous energy and good sense is truly amazing to those who have batted their heads against the stonewall indifference of the industry toward cooperative movements. It is also an achievement which puts the entire industry in his debt to an extent which never will be fully evaluated.

He has not, of course, worked alone. He has been the driving force, the damn-the-torpedoes energizer of the program. But he has also had the benefit of wise counsel and many manhours from such industry figures as John Wyllie, Harry Alter, Warren Farr, Emerson Brandt, and Phil Redeker.

JOHN WYLLIE ENLISTS SUPPORT FOR PROGRAM

Mr. Kromer would probably give particular credit to John Wyllie for his persistence, patience, and dogged determination to see the thing through and enlist for Mr. Kromer the aid of all the manufacturers and their organizing talent. Long known as one of the industry's most effective negotiators, the diplomatic Mr. Wyllie has had a lot to do with getting industry-wide support for and cooperation with the program.

William Feather recently said: "Usually it takes so much time and energy to organize an organization that the purpose of the organization is forgotten before it is organized." It is right at this point that Mr. Wyllie is most useful: he never for a moment loses sight of the main objective.

Even more to be appreciated are the 130 local coordinators, who are actually putting the training program into effect in their own communities. They are too numerous to list here, but their efforts are known and appreciated in the cities where they work.

THE PROGRAM IS ACTUALLY IN OPERATION TODAY

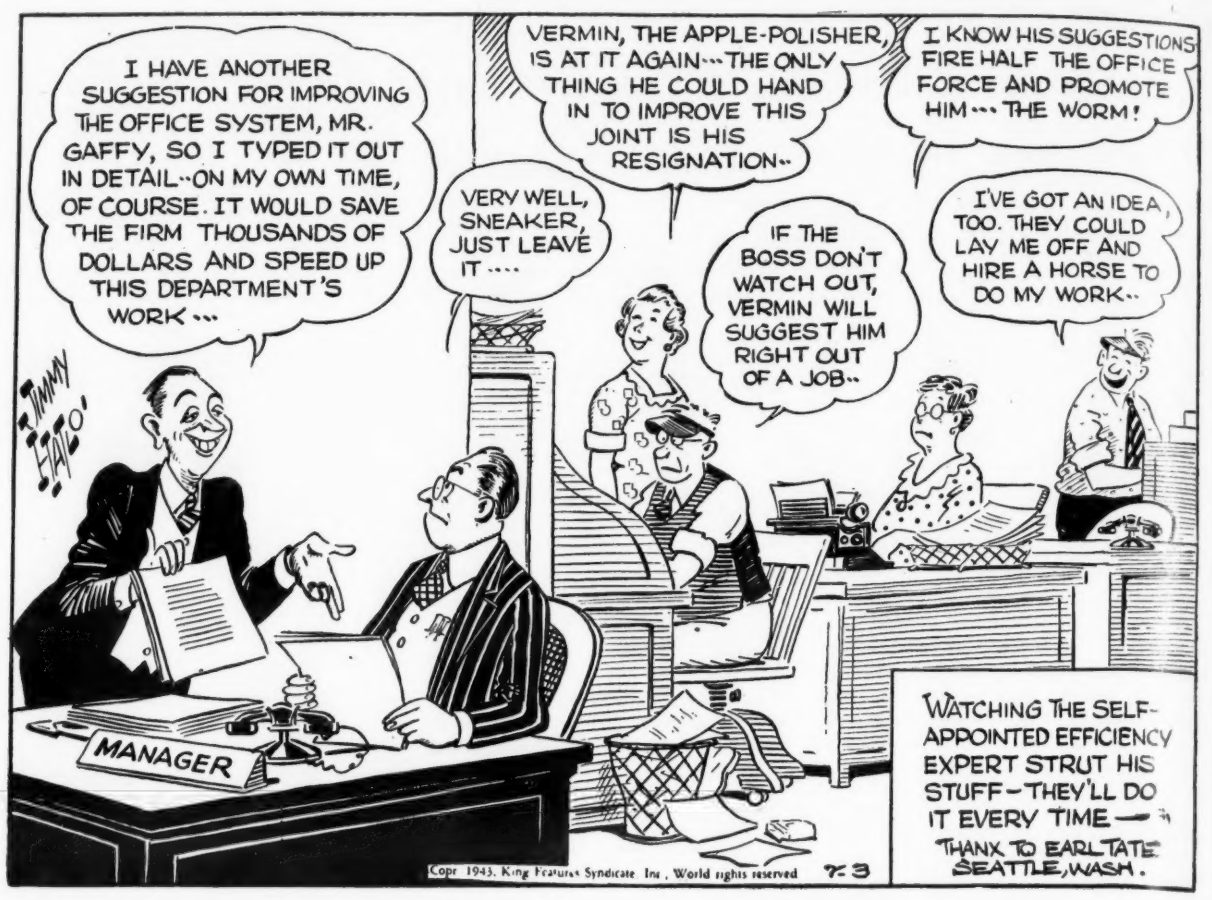
The great thing about this program is that it actually is working. Its progenitors believe it will turn out at least 5,000 new men who will know the rudiments of refrigeration repair work. (They will be far from skilled workmen—only years of experience can create that "know how"—but they will be *something,* and may just barely tide us over the frightening load of repair work due this summer.)

It should be noted that nobody is paying the salaries of the men working on this program. They are already overloaded with their own work, just as you and I. But they all see that for want of more service men *this summer* much of the work that all of us in this business have been sweating over can be nullified.

In those communities where no coordinator nor training school has been set up, we trust that public-spirited members of the community will come forward and contribute their time and services. If they don't, their communities, their business reputations, and the industry which has afforded them their livelihood are all likely to suffer in the trying months to come.

They'll Do It Every Time

By Jimmy Hatlo



LETTERS

WHOOPS—WE'RE SORRY

Atmospheric Control Co.
Detroit, Mich.

Sirs:

When I first looked at the drawing illustrating the 2-stage refrigeration cycle on page 19 of the April 10 issue I thought maybe I was finally getting a little goofy with all the priority problems, etc. that fall on our neck these days.

But I got it quickly—you just turn the page upside down and then it is rightside up. No doubt this is some sort of a trick to relieve the monotony of the readers.

But to forget the kidding for a minute, I want to say that Carl Olin has a swell article on a subject on which there is almost no published information.

HARRY LEVINE

Answer: To Author Olin and to its readers the NEWS apologizes for a mechanical error that occurs once in a blue moon. Some difficulty was encountered during the press run of the April 10 issue, and in making some adjustments the pressman turned the illustration on page 19 upside down so that some issues were printed in this fashion.

KEEPING TRACK OF PRIORITIES

White Bros.
Racine, Wis.

Editor:

You're doing such a good job keeping us informed that we hestitate to ask for more, or even make a suggestion.

Keeping up on the priority situation is one of our greatest problems. This would help us:

A semi-monthly list of major items together with the order number affecting these items, with a brief explanation of the proper method or form to use in securing them.

We note that newspapers are publishing a similar service for housewives.

VICTOR M. WHITE

Answer: Your suggestion on a monthly list of priorities has some merit, but the problem is not quite as simple as the tabulation of rationing dates, etc., which the newspapers print for housewives.

In order to make use of most of the priority regulations, it is necessary to refer either to the text or a lengthy interpretation of the order. Because of this we have attempted to publish either the text or a detailed interpretation of any order which is likely to affect those in the industry.

Thus it is difficult to offer a brief summation that would be helpful to the man in the field. Some readers make a practice of clipping the priority material and keeping it in a separate file while others who like to keep their file of the NEWS intact make their own index of the priority information that is published.

CONVERSION TO METHYL PRESENTS MANY PROBLEMS

Jas. H. Martin, Inc.
Contracting Engineers
503 W. Forty-Third St.
New York City, N. Y.

Sirs:

Sometime ago I read your paper in which there was a very interesting article on the conversion of "Freon-12" jobs to methyl chloride, which I misplaced.

I would appreciate a copy of the aforementioned article or any other articles in which data is given on this subject, pertaining not only to refrigeration, but especially to air conditioning.

S. SICHERMAN,
Draftsman & Estimator

Answer: Several articles have been published in AIR CONDITIONING & REFRIGERATION NEWS on this subject. Principal ones have been the following:

"Methyl Chloride Limitations—How to Avoid Hazards," by Dr. W. O. Walker, Ansul Chemical Co., Sept. 13, 1943, page 8.

"Changing from 'Freon-12' to Methyl Chloride," by P. B. Reed, Sept. 13, 1943, page 10.

"Stick to ASA Safety Code in Changing Refrigerants," A. C. Buensod, Buensod-Stacey, Inc., Sept. 13, 1943, page 18.

"Three Manufacturers Discuss Substitution of Methyl Chloride for 'Freon-12,'" Sept. 27, 1943, page 12.

"Conversion of 'Freon' Valves to Methyl Chloride Operation," F. Y. Carter, Detroit Lubricator Co., Oct. 25, 1943, page 16.

F.T.C. CAN SUPPLY COPIES OF DISTRIBUTION REPORT

McCray Refrigerator Co.
Kendallville, Ind.

Editor:

We are interested in the F. T. C. report on distribution costs referred to in your March 13, 1944 issue of AIR CONDITIONING & REFRIGERATION NEWS.

Where can we get a copy o fthis report?

GEORGE K. BENTLEY,
Refrigeration Engineer

Answer: You should be able to get this report from the Federal Trade Commission, Publications and Procurement Division Washington 25, D. C.

HATES TO MISS A COPY

105 So. 13th St.
Decatur, Ind.

Editor:

Please find enclosed my check for $7 for a two year subscription to AIR CONDITIONING & REFRIGERATION NEWS to which my subscription expires today.

Since taking your paper for a year now, I look forward from week to week to get it. I don't want to miss a single copy.

CURTIS F. HILL

Quick-Freeze Industry One of Nation's Biggest, Says Birdseye

CHICAGO—"America's quick-freeze food processing industry is already bigger than the country's total railroad and steel industries combined," stated Clarence Birdseye, refrigeration consultant to General Foods Corp. and a pioneer in his field, in his address to the eleventh annual commercial meetings of the Edison Electric Institute in Chicago April 5.

He backed this dramatic statement with supporting fact. Of all the foods we use, he pointed out, 75% of them need preservation through some kind of processing—canning, concentration, dehydrating, freezing.

Freezing has emerged as the most satisfactory of these, he added, and centered his discussion on this method as the one of greatest interest to his audience, made up of manufacturers and utility men from all parts of the country.

The freezing of foods uses electricity all the way, from the very opening stages in which vegetable seeds are electrically dried before planting. After picking, he explained, food products are washed, conveyored, and sorted, all by the use of electric power, before freezing even begins.

The freezing itself takes the great part of the power load. By weight, food is 90% water, he reminded his audience, and quick freezing means sub-zero temperatures. Only electricity has been able to handle it.

The idea of artificial freezing is not new, Mr. Birdseye said, and gave a brief background going back as far as 1870, when natural ice and salt were first used to cool food storage rooms.

In 1876 frozen food was shipped to Great Britain under the same method. It was not until 1924, he declared, that quick-frozen dressed foods began to be shipped under electrically controlled temperatures. Since that time the growth of the idea has been impressive.

The field ahead is wide open, however, he stated, pointing out that truck and railroad transportation of refrigerated goods still uses ice and salt most of the time.

Locker plants have shown their greatest growth during the last 10 years, he outlined. They began as wholesalers' private warehouses, and the exact direction community freezing will take is still being determined. But he felt little doubt of their important part in the postwar domestic market.

He pointed out specific instances where locker men now slaughter the farmer's beef for him, dress it on the spot, pickle or smoke it, and store it away for him under refrigeration.

The farmer himself will not try to do his own freezing, Mr. Birdseye believed. He will raise his crops and livestock in bulk, as always, sell it in gross lots, and buy back in processed form what he wants for his own use.

The farmer will be a good prospect for holding-temperature boxes, however. His necessity for keeping milk, eggs, and a few other fragile foodstuffs will make that inevitable, Mr. Birdseye thought. But bulk freezing just a few times a year would make major investment impractical.

Suburban householders and victory

Drastic Reductions Are Made In Government Stockpiles

WASHINGTON, D. C.—Heeding the warning of WPB officials that great government stockpiles may "overhang and disrupt the postwar market," the joint chiefs of staff have approved a new stockpile policy which will tend to reduce government holdings.

"The effect will be to scale down, somewhat, the stockpiles that we thought necessary earlier in the war," declared one official, reminding that three-year stockpiles once were believed necessary when foreign producing areas were being taken over by the enemy forces almost every week.

A higher stockpile of any material which must be transported overseas is permitted under the new policy, which puts the stockpile goal for each critical material at a quantity equal to three months' total wartime consumption, or one year's consumption less the amount which can be produced by North America alone, which is higher.

If there is any danger that the enemy may capture producing areas, or that transportation may be interrupted, or that the demand may be increased by changing war programs, stockpiles will be greatly increased, however, it was pointed out.

Carrier's Marine Dept. Has New Personnel

SYRACUSE, N. Y.—The resignation because of ill health of R. L. Tomlinson, for 21 years manager of the marine department of Carrier Corp., is announced by E. T. Murphy, senior vice president.

Leo Starr and J. R. Lewis of the marine department, have been appointed to the posts of sales manager and operations manager of the department, respectively. Mr. Starr has been with Carrier for a period of 21 years, while Mr. Lewis joined the company in 1931. They will report directly to James A. Bentley, vice president, who will also direct the affairs of the marine department.

Automatic Control System Features Army Camp Bakery Installation

Officer In Charge Is 'Sold' on System and Plans Model One In Own Postwar Bakery

FORT KNOX, Ky.—Refrigeration, widely used in civilian bakeries, is utilized in the bakery of this Army camp to control temperature and humidity in the fermentation room and to keep the dough mixing machines cooled to the proper temperature through chilled water.

The system, installed a year ago by Home Comfortable, Inc., Airtemp dealer in Louisville, Ky., consists of an Airtemp 3-CUD unit and a 5-CUA machine connected to water chilling equipment.

Each of the two refrigerating units is connected to a 150 gallon water chiller to produce 37° F. water for dough cooling and air conditioning.

The 3-hp. unit is controlled by a pressurestat and thermostat, the latter being immersed in the water tank and set at limits of 34° and 37°. When the water temperature falls to 34° the thermostat cuts refrigeration effect by shutting a solenoid valve in the liquid refrigerant line from the condensing unit. The pressurestat directly controlling the unit is set to cut in at 27 lbs. and cut out at 10 lbs.

This closed circuit chilled water system provides a continual flow of approximately 37° water to the fan-coil unit serving the fermentation room and to the dough mixing machine water jackets. A thermostat in the dough machines operates a valve in the chilled water line to bypass water to the storage tank when the thermostat is satisfied at 37°.

Constant 74° F. wet bulb and 80° F. dry bulb conditions are maintained in the fermentation room by the fan-coil unit. A room thermostat regulates room temperature by controlling a motorized valve in the line supplying chilled water to the fan-coil unit, which consists of hot and cold water coils and a steam type spray humidifier.

The 5-hp. refrigerating unit is connected to its 150-gallon water chiller in the same manner.

Lieut. C. E. Taylor, in charge of the bakery, operated a successful bakery of his own before the war, and as a result of his experiences at Fort Knox says, "I most certainly have definite ideas for a model bakery to be used when the war is won, the first of which will be the installation of refrigeration equipment such as used here."

Sgt. Forward, a refrigeration service and installation man in civilian life, is in charge of the cooling equipment in the bakery, while Sgt. Hobbs is responsible for maintenance.

-70° F. Unit on Plane For Foreign Service Day After It's Ordered

DAYTON, Ohio — Twenty-four hours after George Sanders of Morton Show Case Co. here received a rush order from the Army Air Forces at Wright Field for a sub-zero cabinet to be flown overseas, Kold-Hold Mfg. Co. of Lansing, Mich. had the -70° F. unit crated for export.

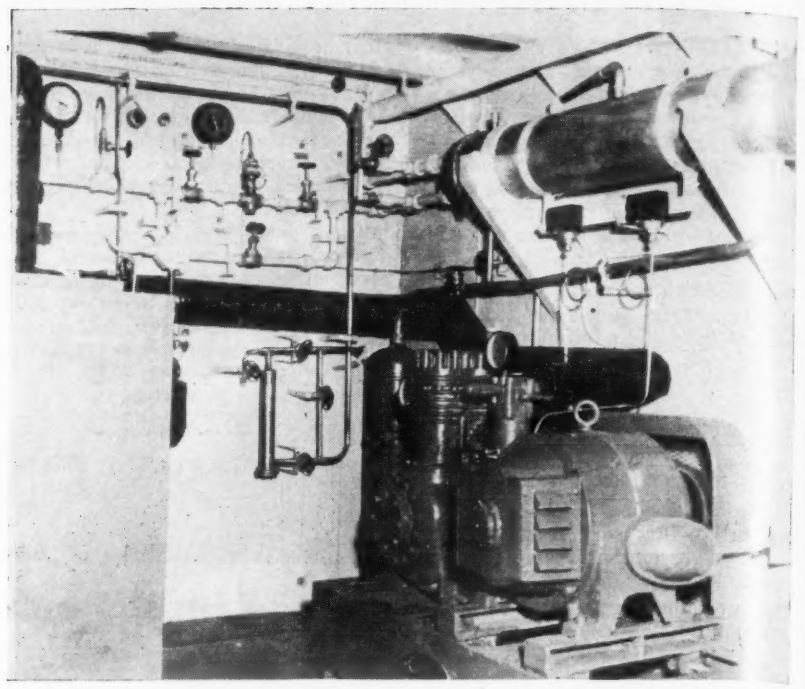
Two hours later John H. Cooledge, president of Sherer-Gillett Co., Marshall, Mich., arrived in Lansing, loaded the crate on his truck, and "high-tailed it" for Wright Field, where a special transport plane was waiting when he arrived. The unit was promptly placed in the plane and flown abroad.

Brunner Has New Quarters In New York

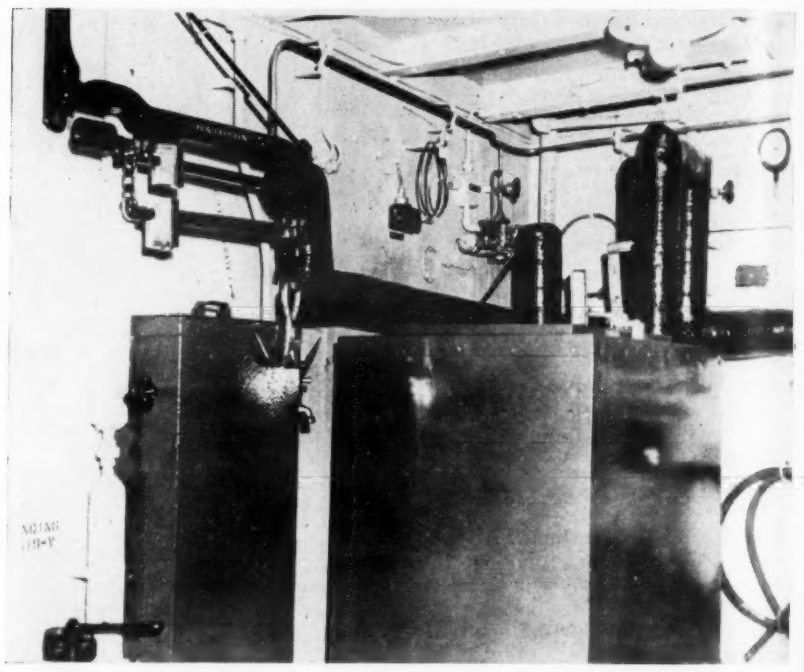
UTICA, N. Y. — George W. Mathews, Brunner Mfg. Co. New York district manager, who has been operating from temporary quarters since his recent appointment, is now permanently located at 340 West Fifty-seventh St., New York, according to B. J. Scholl, sales manager.

Previous to his being given the New York post, Mr. Mathews had served the Brunner organization in the Detroit and Chicago territories. The position had been left vacant following the death of Norman J. Cowles last November.

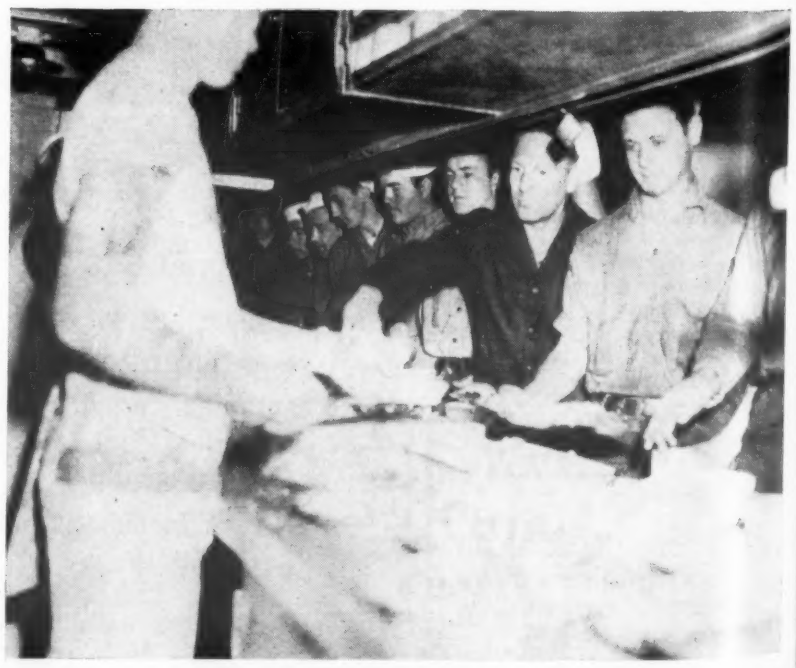
Tank Landing Ships Safeguard Food Supply With Modern Refrigeration



Our armed forces biggest landing craft, the LST (Landing Ship—Tanks), is a regular ocean-going vessel and a modern mechanical refrigeration system is an integral part of its equipment. In this installation a Carrier refrigerating machine and a shell-and-tube cooler provides refrigeration for food preservation and water cooling.



This ice maker supplies ice for cooling drinking water and the soda pop sold in the ship's stores. Located near the ice-maker is a thawing tank in which the metal containers of ice are dipped to release their contents.



The LST crew lines up for chow—wholesome, fresh foodstuffs preserved by the most modern equipment the refrigeration industry can produce.

Servicing the G-E Refrigerator Line

General Service Procedures

Adding Refrigerant

1. Use special Monitor Test adapter and factory charged bottle of refrigerant for all Sealed machines. Also use special circular wrench on CA Form A machines.
2. See that lead gaskets in adapter are clean and in good condition. Small flakes can be scraped off with a knife.
3. Pull out adapter valve-stems as far as possible.
4. See that purging screw in shorter stocky end of adapter is closed tightly.
5. See that valve-stem packing-gland nuts are tight.
6. Shut off machine.
7. Remove float valve cap.

With some CA and D2 machines, it is also necessary to remove an auxiliary sealing plug over purging screw. Soft solder around auxiliary sealing plug can be scraped out with a blunt-pointed screw driver or melted with an electric heating element.

8. Loosen float-valve purging screw.

Open it just a crack and immediately close it. Then, when adapter is installed, screw can be easily turned with valve stem.

9. Connect shorter stocky end of adapter to float-valve purging screw socket.
10. Take off cap of proper refrigerant bottle (Sulphur Dioxide, "Freon-12," or Methyl-Formate) and loosen bottle purging screw.

Put oil in screw socket of Methyl-Formate bottles so as not to draw in air.

11. Screw bottle into longer thin end of adapter.
12. Bleed air from adapter.

a. With DR machines, push valve-stem into float-valve purging screw and open one-half turn.

b. With CA machines, push valve-stem into bottle purging screw and open one-half turn.

c. Open adapter purging screw for a moment, bleeding air from adapter. Close immediately.

13. Open purging screw in float valve and in bottle three to five turns.
14. Apply heat to refrigerant bottle. Heat until bottle is as hot as hand can stand.

Attach special electric heater over bottle or direct other type heater toward bottle.

15. Tighten purging screw in bottle and in float valve by tightening valve-stem handles. Then open purging screw in adapter to relieve pressure.

If liquid comes out of adapter, it is indication that bottle was not heated long enough. If excess gas comes out, purging screws in bottle and float-valve should be opened and reseated.

16. Disconnect adapter from float valve and bottle. Replace bottle cap.
17. Test float-valve purging screw for leak by putting light oil in socket.

Bubbling in oil is an indication of a leak. Open and reset purging screw. Use bottle cap if leak cannot be stopped.

Editor's Note: This is the eighth of a series of articles describing the servicing of General Electric Co.'s refrigerators, which is being published in Air Conditioning & Refrigeration News. This series was prepared by the Product Service Division of G-E's Appliance and Merchandise Department.

Test Adapter

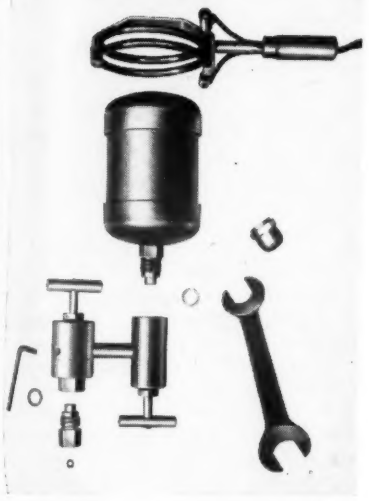


Fig. 29—Monitor test equipment.

Test Equipment Hook-up for Adding Refrigerant

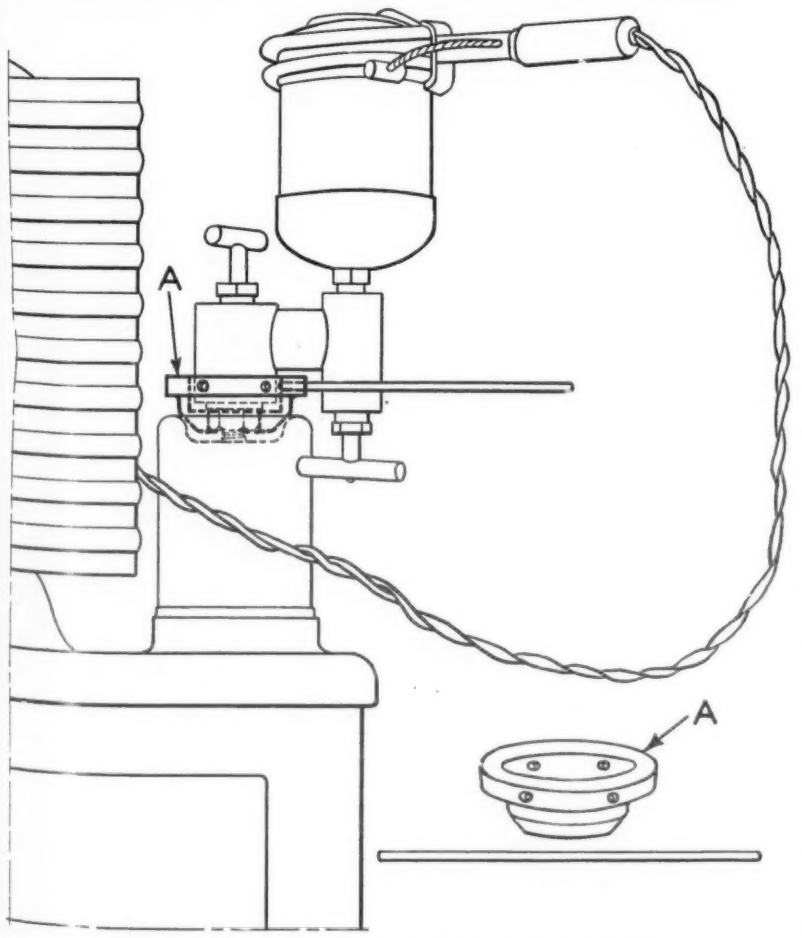


Fig. 30—Adding refrigerant to DR and CA machines.

Task Committee Report on Refrigeration Requirements In Places Handling Food

Data on Equipment In All Types and Sizes of Food Handling Concerns

Editor's Note: This is the final instalment of a series of excerpts from a report by the Task Committee of the General Refrigeration Industry Advisory Committee on requirements for domestic civilian food processing, preservation, and storage.

Some readers have termed the report the most "comprehensive survey ever to be made of the requirements for refrigeration equipment in the food field." The excerpts published in the NEWS show the number of establishments utilizing refrigerating equipment in various branches of the food handling fields; type and extent of equipment in such establishments; overall value; and the estimated life and normal replacement rate.

(9) Locker Plants (Freezing and Storing)

Statistics furnished the Committee by the Department of Agriculture, which figures are based on recent surveys, reveal that prior to 1942 there were 4,600 locker plants averaging 327 lockers per plant. Approximately 40% of these locker plants are equipped with ammonia refrigeration systems and 60% with low-pressure refrigeration equipment, principally for use with "Freon-12." The average cost is $8 per locker.

The typical average ammonia refrigeration installation necessitates the following refrigeration equipment or equivalent thereof:

1—4 x 4 inch double-cylinder self-contained ammonia condensing unit.

1—7½-hp. electric motor with starter.

2,500 lin. ft.—1¼ inch room cooling coils.

1—Low pressure trap and controls.

Necessary ammonia valves, fittings, pipe, and connections.

Necessary water valves, fittings, pipe, and connections.

The typical average low-pressure refrigeration installation necessitates the following refrigeration equipment or equivalent thereof:

1—4 x 4 inch "Freon" condensing unit.

1—7½-hp. electric motor and starter.

1—Room space chiller with fan motor and starter.

30-plate type evaporators and controls.

Necessary "Freon" valves, fittings, pipe, and connections.

Necessary water valves, fittings, pipe, and connections.

Although now such equipment as outlined above is usually sold to the user by a manufacturer's agent, distributor, or dealer, instead of direct by the manufacturer, the Committee determined to treat this classification as if such equipment were customarily sold direct to the user by the manufacturer on a delivered and erected basis. The Committee's reason for this procedure was to introduce a factor which would offset figures in other classifications where, although some sales are made direct by the manufacturer, the classifications are treated as exclusive sales through agents, distributors, and dealers.

On a delivered and erected basis, present-day prevailing prices, the average price for such equipment is $8 per locker capacity, or $12,033,600 for the total 4,600 plants.

The average life of such plants is estimated at 12½ years and the normal replacement rate at 8% per annum.

(10) Public Cold Storage

"Refrigerated Warehouse Space Survey as of June 16, 1941," published in December, 1941, by the Agricultural Marketing Service of the U. S. Department of Agriculture, reveals 1,459 cold storage plants, exclusive of meat packing establishments, having a gross space of 464,151,000 cu. ft.

The typical average cold storage plant has a combined cooler and freezer requirement of 318,000 cu. ft. and necessitates the following refrigeration equipment or equivalent thereof:

1—7½ x 7½ inch single-acting vertical double-cylinder ammonia compressor.

1—60-hp. electric motor and starter.

1—6½ x 6½ inch single-acting vertical double-cylinder ammonia compressor.

1—30-hp. electric motor and starter.

2—Horizontal shell-and-tube type ammonia condensers.

1—Ammonia receiver.

30,000 lin. ft.—2 inch room coils.

1—Low pressure trap and controls.

2—Ammonia circulating pumps with motors and starters.

Necessary ammonia valves, fittings, pipe, and connections.

Necessary water valves, fittings, pipe, and connections.

Such equipment as outlined above is customarily sold direct to the user by the manufacturer on a delivered and installed basis, and hence would be reported by the manufacturer on this basis on CMP applications. Based on present-day prevailing prices, the average price for such equipment as outlined above would be $45,000 per plant, or $298,000,000 for the total 6,500 plants.

The average life of such plants is estimated at 20 years and the normal replacement rate at 5% per annum.

(11) Ice Manufacture And Storage

Statistics furnished the Committee by the War Production Board, which figures are taken from a letter from the National Association of Ice Industries, dated July 20, 1943, reveal 6,500 commercial ice plants having a total daily production capacity of 298,000 tons of ice, and averaging 45 tons of ice per day.

The typical average 45-ton ice plant has a requirement of manufacturing 45 tons of ice per day, plus refrigerating and ice storage having a capacity of approximately 200 tons of ice, and necessitates the following refrigeration equipment or equivalent thereof:

2—8 x 8 inch single-acting vertical double-cylinder ammonia compressors.

2—75-hp. electric motors and starters.

2—Vertical shell-and-tube type ammonia condensers.

1—Ammonia receiver.

1—Low pressure trap and controls.

1—Freezing tank, complete with cooling coils, brine agitator with motor and starter, framework, covers, cans, and air system complete with headers, laterals, and tubes.

1—Air blower with motor and starter.

1—Can filling tank.

1—Can dump.

1—Crane and hoist with motor.

4,000 lin. ft.—2 inch room coils with controls.

2—Condenser water circulating pumps.

Necessary ammonia valves, fittings, pipe, and connections.

Necessary water valves, fittings, pipe, and connections.

(12) Wholesale and Distributing Establishments

Statistics furnished the Committee by the War Production Board, which figures are based on the 1939 Census of Manufactures, reveal the number of establishments under this classification, subdivided by types of business and product handled and including average annual sales volume. No statistics are available to indicate what percentage of the total utilize refrigeration equipment nor the size or quantity of refrigeration equipment so utilized.

The Committee studied each subclassification and estimated from their experience the percentage of the total having refrigeration equipment and the type of refrigeration equipment installed in the typical average establishment. The exact treatment given each subclassification is as indicated hereinafter.

Establishments under this classification were treated in several different subclassifications, as follows:

(a) Dairy products.
(b) Dairy and poultry products.
(c) Poultry and poultry products.
(d) Fruit and vegetables (fresh)
(e) Fresh fruit (only).
(f) Confectionery.
(g) Fish and sea food.
(h) Meat and provisions.
(i) Grocery specialties.
(j) Manufacturer's sales branch.
  (1) Farm products.
  (2) Confectionery.
  (3) Fish and sea food.
  (4) Meats and provisions.
  (5) Specialties.

Each of the above subclassifications was treated separately in accordance with the following:

(a) DAIRY PRODUCTS

Statistics reveal 2,184 establishments in this classification having average annual sales of $200,000. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

Estimated price per pound—20

(Concluded on Page 17, Column 1)

Refrigeration Requirements For Food Processing Plants

(Concluded from Page 16, Column 5)

cents; 1,000,000 pounds per year, or 21,000 pounds per week. Cold storage approximately 20 x 30 x 10 feet. Estimated load 50,000-75,000 B.t.u. per hour. Estimated storage temperature 33-36° F.

75%—1—Walk-in cooler with 1—7½-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $2,375,000 for the total 2,184 establishments.

The average life of such equipment is estimated at 12½ years and the normal replacement rate at 8% per annum.

(b) DAIRY AND POULTRY PRODUCTS

Statistics reveal 760 establishments under this classification having average annual sales of $300,000. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

Estimated price per pound—20 cents; 1,500,000 pounds per year, or 30,000 pounds per week. Cold storage approximately 50 x 60 x 10 feet. Estimated load 150,000-200,000 B.t.u. per hour. Estimated storage temperature 33-36° F. and 0-5° F.

75%—1—Walk-in refrigerator with 1—15-hp. condensing unit.

50%—1—Walk-in refrigerator with 1—7½-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $1,852,000 for the total 760 establishments.

The average life of such equipment is estimated at 12½ years and the normal replacement rate at 8% per annum.

(c) POULTRY AND POULTRY PRODUCTS

Statistics reveal 1,635 such establishments having average annual sales of $100,000. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

Estimated price per pound—17 cents; 600,000 pounds per year, or 12,000 pounds per week. Cold storage approximately 30 x 50 x 10 feet. Estimated load 75,000-100,000 B.t.u. per hour. Estimated storage temperature 33-36° F. and 0-5° F.

75%—2—Walk-in refrigerators, each with 1—7½-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $1,770,000 for the total 1,635 establishments.

The average life of such equipment is estimated at 12½ years and the normal replacement rate at 8% per annum.

(d) FRUIT AND VEGETABLES (Fresh)

Statistics reveal 5,449 such establishments having average annual sales of $200,000. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

Estimated price per pound—5 cents; 4,000,000 pounds per year, or 80,000 pounds per week. Estimate 25%, or 20,000 pounds per week, in cold storage. Cold storage approximately 50 x 60 x 10 feet. Estimated load 125,000-150,000 B.t.u. per hour. Estimated storage temperature 33-36° F.

75%—2—Walk-in refrigerators, each with 1—7½-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $11,820,000 for the 5,449 establishments.

The average life of such equipment is estimated at 12½ years and the normal replacement rate at 8% per annum.

(e) FRESH FRUIT (Only)

Statistics reveal 905 establishments in this classification having average annual sales of $150,000. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

Estimated price per pound—7 cents; 2,140,000 pounds per year, or 44,000 pounds per week. Estimate 25%, or 11,000 pounds per week, in cold storage. Cold storage approximately 25 x 50 x 10 feet. Estimated storage temperature 33-36° F.

75%—1—Walk-in refrigerator with 1—7½-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $978,000 for the 905 establishments.

The average life of such equipment is estimated at 12½ years and the normal replacement rate at 8% per annum.

(f) CONFECTIONERY

Statistics reveal 2,089 establishments in this classification having average annual sales of $60,000. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

25%—1—Walk-in refrigerator with 1—1-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $167,000 for the total 2,089 establishments.

The average life of such equipment is estimated at 12½ years and the normal replacement rate at 8% per annum.

(g) FISH AND SEA FOOD

Statistics reveal 1,182 establishments under this classification having average annual sales of $125,000. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

75%—1—Walk-in refrigerator with 1—3-hp. condensing unit.

50%—1—Walk-in refrigerator with 1—5-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $1,339,000 for the total 1,182 establishments.

The average life of such equipment is estimated at 12½ years and the normal replacement rate at 8% per annum.

(h) MEAT AND PROVISIONS

Statistics reveal 2,552 establishments under this classification having average annual sales of $200,000. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

Estimated price per pound—15 cents; 1,300,000 pounds per year, or 26,000 pounds per week. Cold storage approximately 15 x 30 x 10 feet. Estimated load 30,000-50,000 B.t.u. per hour. Estimated storage temperature 33-35° F.

85%—1—Walk-in refrigerator with 1—5-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $2,420,000 for the total 2,552 establishments.

The average life of such equipment is estimated at 12½ years and the normal replacement rate at 8% per annum.

(i) GROCERY SPECIALTIES

Statistics reveal 4,394 establishments under this classification having average annual sales of $150,000. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

60%—1—Frozen food storage with 1—1-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $884,000 for the total 4,394 establishments.

The average life of such equipment is estimated at 12½ years and the normal replacement rate at 8% per annum.

(j) MANUFACTURER'S SALES BRANCH

Establishments under this classification were treated under several different subclassifications, as follows:

(1) FARM PRODUCTS

Statistics reveal 610 farm products establishments under this subclassification. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

75%—1—Walk-in refrigerator with 1—2-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $285,000 for the total 610 establishments.

The average life of such equipment is estimated at 12½ years and the normal replacement rate at 8% per annum.

(2) CONFECTIONERY

Statistics reveal 56 establishments under this classification. The Committee estimated that these 56 establishments could be considered as having only domestic-type refrigerators and, therefore, beyond the scope of this report.

(4) MEATS AND PROVISIONS

Statistics reveal 924 establishments under this classification. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

85%—1—Walk-in refrigerator with 1—5-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $858,000.

(5) SPECIALTIES

Statistics reveal 1,212 establishments under this classification. The Committee estimated the average size and type of refrigeration equipment installed in such establishments and the percentage of the total having such refrigeration, in accordance with the following:

60%—1—Walk-in refrigerator with 1—1-hp. condensing unit.

Based on present-day prevailing prices, the average manufacturer's price for such equipment is $233,500.

Appointments Made To Carrier's Foreign Staff

SYRACUSE, N. Y.—Two new appointments on its foreign sales staff have been made by Carrier Corp.

William A. Haile will become manager of the international division's Washington offices. A veteran of United States export trade, engaged for a number of years in foreign sales of industrial machinery, Mr. Haile will leave the Diesel engine division of WPB to join Carrier.

Colin McCulloch has been named market research manager on Vice President Herman Greenwood's staff at the company's Syracuse headquarters. Mr. McCulloch will leave the international division's offices in Washington to assume his new duties on April 15. A native of Great Britain, Mr. McCulloch joined Carrier in 1941.

Admiral Plans New Refrigerator Designs, Two Freezer Models

CHICAGO — To manufacture its conventional and dual-temp refrigerators and two models of home freezers Admiral Corp. plans to spend $300,000 for retooling, according to a recent announcement by Ross D. Siragusa, president.

No design changes are contemplated for the line of electric ranges which Stewart-Warner Corp. had just put on the market before production was halted, Mr. Siragusa said.

Despite changes in the refrigerator line, the company intends to maintain the former sources of supply for components parts, although additional suppliers will be needed because of increased requirements, it was said.

Former Stewart-Warner distributors are being lined up by J. H. Clippinger, Admiral vice president in charge of sales, to complement Admiral coverage of metropolitan areas. The two selling organizations are expected to be completely merged during the year, it was indicated by Mr. Clippinger.

Claiming to be the world's largest producer of radio-phonograph combinations, the company was originally formed in 1934 as Continental Radio and Television Co. Its plant has grown until it covers eight acres and the firm is now producing war goods at the rate of about $40,000,000 a year.

5 Dry Ice Producers Charged With Trade Discrimination

FTC Says They Tried to Get Monopoly

WASHINGTON, D. C.—Five manufacturers of liquid and solid carbon dioxide (dry ice) have been charged by the Federal Trade Commission with violation of Section 5 of the Federal Trade Commission Act and the Robinson-Patman Antidiscrimination Act in a complaint issued recently.

Named in the complaint are Air Reduction Co., Inc., its subsidiary, Pure Carbonic, Inc., and Mathieson Alkali Works, Inc., all of 60 E. 42nd St., New York City; Liquid Carbonic Corp., 405 Lexington Ave., New York City; and Michigan Alkali Co., Wyandotte, Mich.

FTC charges these companies with "conspiring to eliminate price competition and to monopolize the production, sale, and distribution of their products" in addition to "selling liquid and solid carbon dioxide to some of their customers at lower prices than they sell such products of like grade and quality to other purchasers."

SOLD MORE THAN 50%

According to FTC, Pure Carbonic, Inc. and Liquid Carbonic Corp. between them sell more than 50% of the total sale of liquid and solid carbon dioxide for commercial use in the United States.

"These respondent corporations and the Mathieson Alkali Works," says the FTC, "sell their products principally to ice cream and soft drink manufacturers, beverage bottlers, soda fountains, frosted food manufacturers and retailers, and other purveyors of perishable food products.

"The Michigan Alkali Co. manufactures such products and sells them principally to wholesalers. Pure Carbonic, Inc. and Liquid Carbonic Corp. also manufacture converters which they sell to beverage bottlers for liquefying dry ice, and sell the dry ice for use therein, and Liquid Carbonic Corp. manufacturers and sells cabinets for preserving ice cream and other perishable products by the use of dry ice."

Count I of the FTC complaint charges that since Jan. 1, 1937 the respondent companies have engaged in the following practices:

"(1) Fixed the prices at which they would sell liquid and solid carbon dioxide to wholesalers and retailers and also the charges for performing various services in connection with the sale and delivery of such products.

"(2) Refrained from selling dry ice to beverage bottlers or owners of converters who use converting equipment other than that sold, leased, or maintained by the respondents.

"(3) Discriminated in price in the sale of solid carbon dioxide by charging customers who convert such dry ice into liquid carbon dioxide by means of converters not sold, leased, or maintained by the respondents, higher prices than those charged customers who utilize the respondents' converters.

"(4) Refrained from competing in certain territories, as in the case of Michigan Alkali Co., which, pursuant to agreement with Pure Carbonic, Inc., discontinued the sale and distribution of dry ice through distributors other than Pure Carbonic, Inc. in the New England states and parts of New York and Pennsylvania.

"(5) Adopted and followed, in certain areas, the policy of cutting prices of liquid and solid carbon dioxide to wholesale and retail customers of the respondents' competitors below the prices charged in other areas where there is less competition, for the purpose and with the effect of taking business from such competitors and driving them out of the market.

"(6) Entered into long-term agreements with manufacturers of carbonic gas in liquid and solid form, wherein it is provided that the manufacturers will not sell such products to the respondents' competitors for the purpose of making dry ice and that the respondents will purchase from the manufacturers either their requirements in certain plants or a fixed minimum quantity approximately equal to such requirements."

UNLAWFUL PRACTICES CHARGED

Violation of the Robinson-Patman Act is charged in Count II, in which FTC claims that the respondent companies engage in the following practices:

"(1) Charge customers who purchase dry ice and convert it into liquid carbon dioxide by means of converting equipment not sold, leased, or maintained by the respondents, substantially higher prices than they charge customers who use the respondents' converters.

"(2) Classify customers according to the quantity purchased over a given period of time, usually a year, and sell to purchasers of the larger quantities at varying discriminatory prices, the most favored customers being sold at discriminatory prices ranging from approximately 20% to as high as 60% less than the highest price charged any customer in the same location.

"(3) Arbitrarily charge some customer substantially less than others in the same or different trade area, for the purpose and with the effect of taking business away from competitors and driving them out of business."

The five companies have 20 days to answer the complaint.

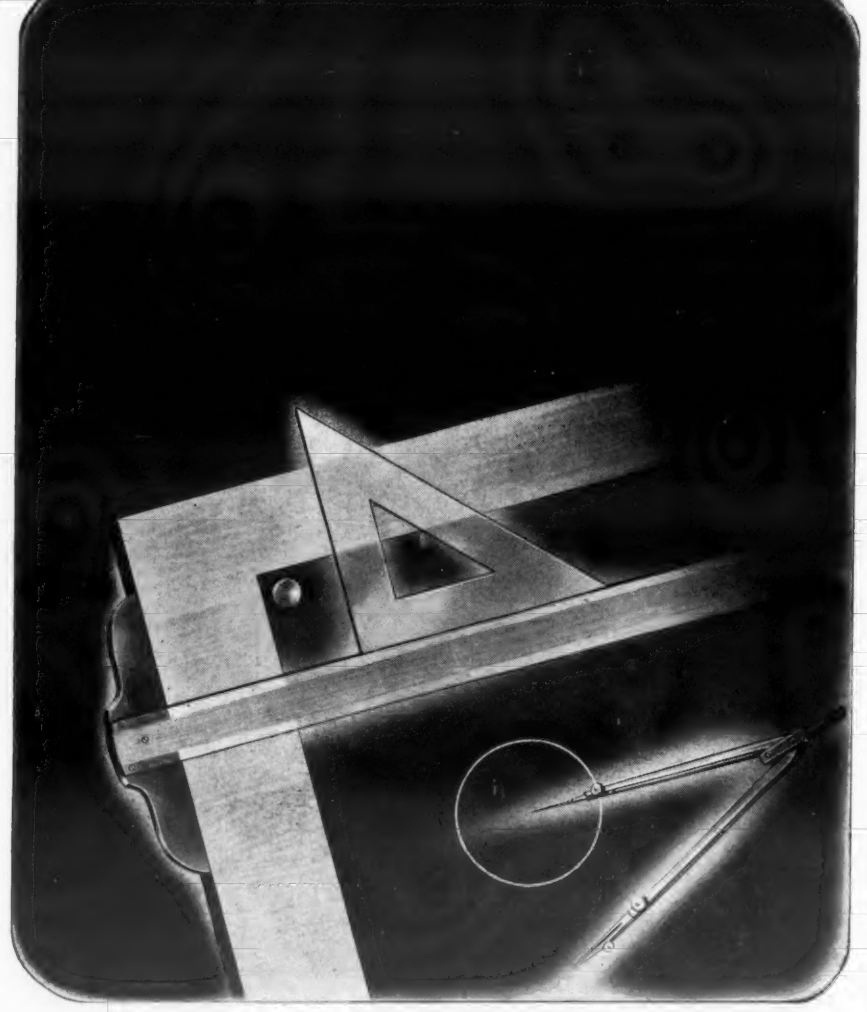
G-E Germicidal Tube Used In New Wall Fixture

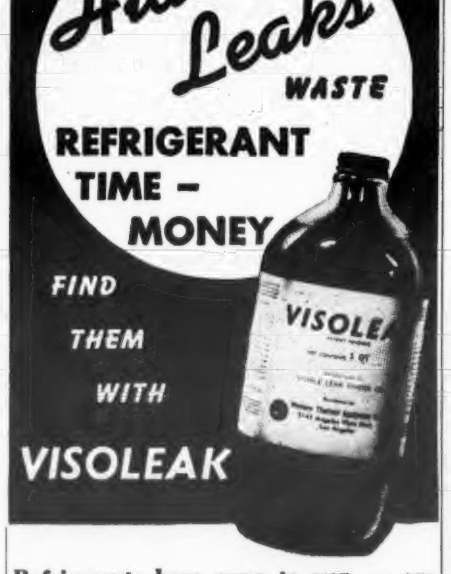
ERIE, Pa. — Combining the General Electric germicidal ultraviolet ray tube and a patented reflector, a fixture known as the "Hygeaire System" has been introduced by the American Sterilizer Co. here for industrial and office applications.

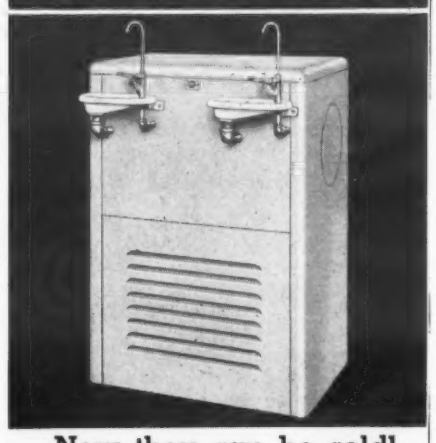
Installed on a wall above eye level, the unit is claimed to produce a blanket of ultraviolet rays up to distances of 35 feet, which kills bacteria and viruses carried into the zone by air. Germicidal effect is claimed to be equivalent to that obtained by making 100 air changes an hour.

Birmingham May Have Public Freezing Plant

BIRMINGHAM, Ala.—The city of Birmingham is investigating the possibilities of converting its old municipal market building into a quick-freeze plant. Ted Brownell, manager of the city auditorium, was sent to Memphis recently to look over a quick-freeze plant. Whether the plant would be operated by the city or leased to private operator was not indicated.







Army Refrigeration Problems

By P. B. Reed

Manager, Refrigeration and Air Conditioning Division, Perfex Corp.

Effect of Altitude On Controls, Valves

When liquids are given heat they get warmer up to a certain temperature, called the boiling point or vaporizing temperature. Further addition of heat does not raise the temperature of the liquid, but instead the additional heat breaks the molecules apart thus causing the liquid to change into a vapor. In comparison with the amount of heat required to simply warm the liquid up to its boiling temperature, it takes quite a lot of heat to break these molecules apart.

In the case of the most common liquid, we know, water, 971.7 B.t.u. are required to boil one pound of water and turn it into one pound of its vapor which we call steam, and it is this heat of boiling, which we call the latent heat of vaporization, that we take advantage of to provide refrigeration.

The boiling point, the temperature at which this takes place, is in the case of water 212° F. provided that the boiling takes place in an open vessel at sea level or equivalent, the equivalent being "standard" atmospheric pressure which is 29.92 inches of mercury above a perfect vacuum which is known as "absolute" zero pressure.

This can best be illustrated by the tube known as the Torricelli tube or more commonly as a barometer. The top of the tube is sealed and in it a "perfect" vacuum exists (as nearly as it is practical to obtain; actually it is within a small fraction of one per cent of being a perfect vacuum); the other end is immersed in mercury which is open to the atmosphere.

The weight of the column of air reaching miles into the stratosphere to infinity pushes the mercury up into the vacuum until the weight of the mercury column balances the weight of the column of air and then we measure the difference in inches of the height of mercury.

At sea level this would be 29.92 inches and we call it by various names, barometric pressure, atmospheric pressure, balance pressure, or zero gauge. On a compound gauge we mark off the dial in inches of mercury below zero gauge, down to 30 and a "standard" "perfect" vacuum would be at 29.92 on the gauge. If the mercury column was one square inch in cross-section we would find that the 29.9 inch column would weigh 14.696 pounds. So we say that zero gauge is 14.7 pounds per square inch (p.s.i.) "absolute" that is 14.7 p.s.i. above zero pressure, which is a perfect vacuum.

If we take our mercury column down 500 feet below sea level (in a mine perhaps) it would read 30.47 inches instead of 29.92 (14.97 p.s.i. abs.) for the column of air pressing on the open mercury is 500 feet higher. Down another 500 feet (to 1,000 feet) the reading would be 31.02 inches (15.75 p.s.i. abs.).

ATMOSPHERIC PRESSURE ABOVE SEA LEVEL

If we take our barometer (mercury column) up 5,000 above sea level on a mountain or in a plane the height of our mercury column will be less, for the column of air pressing down on the mercury is 5,000 feet shorter and therefore doesn't weigh as much. In fact it will have shrunk to 24.89 inches (12.2 p.s.i. abs. or 5.03 inch vacuum). At 15,000 feet it will be only 16.88 inches (8.3 p.s.i. abs. or 13.04 inch vacuum); at 20,000 feet, 13.75 inches of mercury (6.7 p.s.i. abs. or 16.2 inch vacuum) and so on up until at 50,000 feet the mercury column would only be 3.436 inches high corresponding to 1.7 p.s.i. abs. or a 26.5 inch vacuum.

Also it has been getting colder the higher we go, 5.5° F. at 15,000, -12.3° F. at 20,000, -30.1° F. at 25,000, -47.9° F. at 30,000, and above 35,000 it will be as much as -67° F. or below.

Mercury is used in our barometer chiefly because it is heavy and it doesn't take much of it to balance the entire column of air even at sea level—only about 30 inches. Water could be used but as it is much lighter than mercury the height of the water at sea level would be 33.9 feet not inches so the barometer would be a bit cumbersome, especially when we were taking it down in mines, on mountains and up in planes; besides the water would freeze at the higher altitudes and even at sea level in winter.

EFFECT OF ALTITUDE

But, what has all of this got to do with refrigeration?

There are several devices in an ordinary compression system that are affected by atmospheric pressure: Pressure controls, thermostats, expansion valves, constant pressure valves, suction pressure regulating valves, and shaft seals. These devices are designed to operate within a few hundred feet of sea level and the spring pressures, mechanisms, bellows, and diaphragm areas and stresses are designed with the assumption that the internal pressures of the refrigerant will be opposed by an absolute pressure of 14.7 p.s.i.

If we take the device to an elevation where the atmospheric pressure had dropped 2 p.s.i. this will make considerable difference in the adjustments of controls for 2 p.s.i. "Freon-12" amounts to about 2° F. and 2° can make quite a difference on some installations.

Lowered pressure due to altitude will affect the superheat setting of some types of expansion valves, if the atmospheric pressure can get to the upper bellows or diaphragm, in which case the lower atmospheric pressure will not sufficiently counteract inside pressure and the superheat setting will be increased.

Single diaphragm types will not be affected, nor will double diaphragm nor bellows types, if they are sealed to prevent "breathing" and if the sealing is effective.

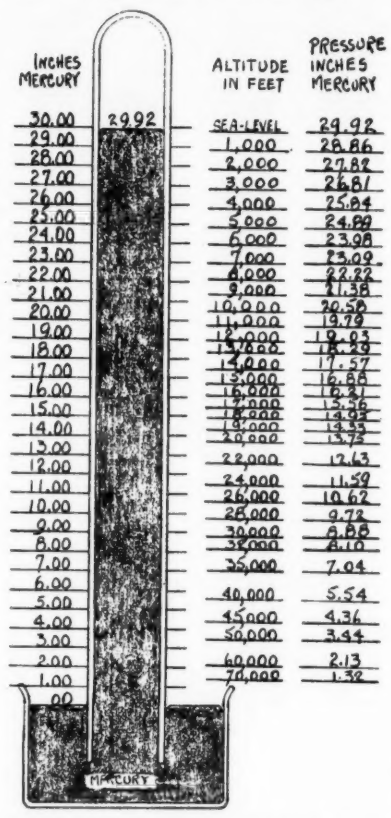
A 2-pound reduction in atmospheric pressure would have an effect similar to raising the setting of the pressure control about 2 pounds (depending upon the area of the bellows or diaphragm, etc.) which would operate the evaporator a couple of degrees higher and this in turn could very well result in a rise of several degrees in temperature in the box. Thermostats are similarly affected.

TABLE OF ALTITUDE AND PRESSURES

The table shows in inches of mercury absolute, and inches of vacuum the effect of altitude on atmospheric pressure. Due to the various designs of controls this table is to be used only to indicate the effect of altitude on barometric pressure and not as the amount to reset controls.

Altitude	Air Pressure	
Feet Above Sea Level	Inches of Mercury Absolute	Inches of Vacuum
0	29.92	0
100	29.81	.09
200	29.71	.21
300	29.60	.32
400	29.49	.43
500	29.38	.54
1000	28.86	1.06
1500	28.33	1.59
2000	27.82	2.10
2500	27.31	2.61
3000	26.81	3.11
3500	26.32	3.60
4000	25.84	4.08
4500	25.36	4.56
5000	24.89	5.03
5500	24.43	5.49
6000	23.98	5.94
6500	23.53	6.39
7000	23.09	6.83
7500	22.65	7.27
8000	22.22	7.70
8500	21.80	8.12
9000	21.38	8.54
9500	20.98	8.94
10000	20.58	9.34

Air Pressure Changes



The higher the altitude, the lower the air pressure. Changes in altitude thus affect many refrigeration devices designed to operate at or near sea level.

Monthly Bulletins on Freezing of Food Distributed to Public by Electromaster

DETROIT — First of a series of four monthly bulletins on the preservation of foods by freezing has been issued by Electromaster, Inc., of Detroit.

The series has been prepared by Miss Ruth Graham, director of electromaster's Home Economics Department and the Nancy Pepper Kitchen, in answer to the scores of requests she has received for information on the various phases of this subject.

The initial bulletin is entitled "Preservation of Food by Freezing and Chemical and Physical Changes Which May Occur." It deals with the precautions which must be taken in preparing and freezing the different types of foods and warns of dangers which may result from improper handling.

The second bulletin will deal specifically with the preparation of fruits and vegetables for freezing, while the third will cover the same steps in respect to meat, poultry, fish and game. "Cooking of Frozen Foods" will be discussed in the last number of the series.

Copies of all four bulletins may be secured free of charge by writing Electromaster, Inc., Detroit 31, Mich.

Exclusive Frosted Food Store Chain Planned

PITTSBURGH—Postwar plan for a chain of exclusive frosted foods stores is planned by M. Feigenbaum & Sons here.

Average dealer now, it was explained, has neither the floor space nor the trade to carry much more than fruits, or fish and sea foods, or chickens and turkeys.

Exclusive frosted foods stores setup would serve small institutions (small hotels and restaurants) unable to buy in case lots, who thus can order for a-day-or-two and receive delivery service.

Stores would be established first in larger cities such as Pittsburgh.

Recommendations for the Locker Industry Are Announced by Operator Groups

Complete Butchering Equipment, Good Accounting, and State Laws Urged

Editor's Note: Reports of committees of the National Frozen Food Locker Association covering various problems of the locker storage plant field were presented at the Locker Executives' Conference last month in Chicago.

Following are the reports presented on certain of the subjects:

New Equipment For Locker Plants

The Committee Members reported to the Conference their views, opinions, and recommendations, as follows:

That all locker plants have a complete service plant. By this, we mean taking the animal on foot and furnishing slaughtering, processing, lard rendering, sausage making, and curing and smoking facilities. We feel that the plant that will survive the postwar period and successfully combat competition is one that furnishes all things to all patrons.

As to the equipment, it need not be elaborate but should be conveniently located to render the most efficient utilization of labor. Any butcher supply house will be glad to furnish a blueprint giving all information needed in the slaughtering room. The plant should be equipped with track scales and plenty of track space to eliminate the handling or carrying of the dressed carcass. In the processing room, we should have electric meat cutter, sausage grinder, and a slicing machine for the cutting up of the meats. Naturally, we would have to have tables, meat blocks, and other incidentals. We are not recommending any particular type of equipment as that is a matter of personal choice.

In the wrapping of meats, particularly poultry, we recommend any vapor proof wrapping, as it eliminates frost on the coils in the quick-freeze room and any frost on the inside of the lockers. It also eliminates dehydration. In fact, it has proved very satisfactory to those who have used it. As to the mechanical poultry pickers, if the plant is going to pick poultry for commercial use or to merchandise chickens, the picker, we feel, would be satisfactory and necessary, but for patrons' use only, the volume would not be great enough to warrant the use of the picker.

In the rendering of lard, we recommend a steam jacketed and open kettle with a unit for stirring the lard.

In the curing and smoking department, any good reputable brine pump is satisfactory and the smoke house need not be elaborate. In the locker room, we recommend more use of the wide type, more shallow locker than was originally built for storage.

We feel that where a plant has the space, it is advisable to have a processing kitchen under the management of a competent operator to supervise the processing of fruits and vegetables and possibly furnish facilities for pressure cooking—the latter more to build good will and help in the war effort than it is to furnish an income for the locker operator.

Locker Accounting Systems

The Committee reported to the Conference their views, opinions, and recommendations, as follows:

That all plants have as a minimum the following items:

I—Customer Records

1) A locker lease contract.

2) A register making duplicate or triplicate copies of combination processing instructions and record of all cash received, or, separate forms carrying processing instructions and records of cash receipts.

3) An individual loose leaf customers' account ledger.

II—Plant Records

1) A journal with debit and credit columns showing cash receipts and disbursements made for each desired department operation. Some may prefer to keep cash receipts and disbursements on opposite sides of the same sheet or in separate journals.

2) Summary and operating sheet would be desirable. Show on a monthly basis "department operations."

3) To make any accounting system complete, a separate Capital Investment Account Book is necessary.

4) Additional help, such as: (1) locker rent due notices, (2) over-flow meat notices, (3) statement slips, etc., left in patrons lockers are desirable.

State Locker Laws and Regulations

This Committee unanimously agrees that law and regulation of locker plants is a need from the standpoint of the public and a need from the standpoint of the operator, and we wish to file the following recommendations for consideration:

1) That all states have a locker law and that the law should define the plant including its physical set-up and the service it renders.

2) To have a separate law and not jointly with some other law.

3) That plant and construction should be such that sanitary and temperature requirements can be maintained.

4) That temperature should be as follows:

(a) Chill and aging rooms 32° to 36° F.

(b) Locker plants to 0° F. with a tolerance of 5° higher.

(c) Sharp freezer to be 10° below zero Fahrenheit in the coil or plate or 10° F. or lower if forced air is used.

5) That employes have health certificates on file.

6) That inspection be carried out by the proper state authorities.

7) Power of inspection by the operator of all foods received for processing or placing in lockers.

8) Slaughter houses shall meet the requirements of the inspecting body.

9) That accurate and complete processing records be kept for the patron.

10) Food not for human consumption shall not be placed in lockers unless approved.

11) That operators not be construed as warehousemen.

12) That rules and regulations be made and enforced by the governing body.

13) And we especially recommend that states consider this matter at

(Concluded on Page 21, Column 1)

Changes In Locker Assn. Convention Arrangements Suggested by Committee

(Concluded from Page 20, Column 5)

the earliest setting of the legislature of the various states so that present contemplated construction be built under the law.

14) And we further recommend that any law that is contemplated be made brief, and that it be added to from time to time after it is enacted, if conditions require it.

National Convention Planning And Locations

The Committee Members reported to the Conference their views, opinions, and recommendations, as follows:

1) The national meeting to be held the third week in September.

2) The locations of the convention—one year near the central part of the United States, as Omaha, Kansas City, Des Moines, etc.; the next year around various parts of the country, then back to the central part again, etc.

3) A three-day convention is most practical to present a good rounded out program in normal times, but for a war conference, a two-day program, starting Monday morning with a possible get-together Sunday evening and concluding Tuesday evening, is more desirable.

4) That manufacturers and suppliers be encouraged to exhibit equipment and supplies at all national meetings because locker operators have an opportunity, and are eager to see what is available and new in equipment and supplies when they come to a National Locker Convention.

5) Breakfast sessions be divided into sections, as for example, one section for operators who have had experience in smoking and curing and another section for operators who want to install smoking and curing but who have had no previous experience. That similar topics likewise be divided for breakfast sessions.

6) It is also suggested that the general assembly meeting adjourn at 4 p.m. daily and that group meetings be held from 4 to 5:30 p.m. on various topics so that each individual will get more of the topics most interesting to him.

7) Exhibits be closed until noon each day.

8) It is suggested that a Canada locker operator be invited to speak at our 1944 convention.

Merchandising Methods For Locker Plants

The committee members reported to the conference their views, opinions, and recommendations, as follows—

1. Consideration was given by the committee as to whether it is advisable for groups of operators, for State Associations, and for sectional organizations within the National to—

a) purchase commercially packed fruits and vegetables in quantities for distribution and retail sales;

b) distribute meat and other food products in quantities under a "trade name," signifying frozen food locker plants.

2. Similar discussions were devoted to other subjects in the merchandising field, and instances of successful merchandising projects were cited, most of which have been conducted independently by locker plant operators in their own communities.

Locker Idea Catches on In Virginia; 8 Plants Now In Operation

BLACKSBURG, Va.—Though there are only eight refrigerated locker plants in Virginia, the idea is spreading rapidly in the state. Plant operators report Virginians are thoroughly sold on the merits of this method of food preservation. A patron gives up his space only when the family leaves the community.

The eight plants now in operation in the state are located at Charlottesville, Crozet, Fredericksburg, Harrisonburg, Lexington, Orange, Broadway and Staunton. Promotion is under way for additional plants at Warrenton, Culpepper, South Hill and in Bath, Lee and Montgomery counties.

Of both the old and proposed plants, some are operated by individuals, partnerships and corporations, and some are mutual organizations or cooperatives. The difference lies largely in who puts up the capital.

Frozen food storage plants cost $35 to $50 per locker of capacity. Lockers rent for an average of $10 to $12. When 200 lockers of a 300-locker plant are rented, the plant should pay its own way.

When a community group sets out to promote a locker plant, it must also think about priorities; but equipment can be had if WPB is shown that finances are at hand to build the plant and if 60 percent of the lockers are rented beforehand to farm families and producers of the food to be stored.

Apple Storage Asked by Nova Scotia Growers

KENTVILLE, Nova Scotia — Immediate construction of a modern cold storage plant in Annapolis Valley with capacity for 50,000 to 80,000 barrels of apples is recommended in a report made by a Nova Scotia apple growers' delegation which recently inspected storage facilities in the State of Washington and the Canadian province of British Columbia.

The report stated: "Your committee is fully of the opinion that the future of the apple industry in the Annapolis Valley is dependent on the efficient use of modern cold storage plants." It suggested, too, that the proposed plant be equipped to handle boxes.

On-the-Spot Plants for Preservation of Food Seen as Next Step

PHILADELPHIA—"The next and biggest step in agriculture is the establishment of fixed and movable processing plants to handle farm products grown nearby," says D. Howard Doane, one of the country's leading professional farm managers, in an article in a recent issue of **Farm Journal.**

These processes can include refrigeration, dehydration, extraction, compressing, concentration, and fabrication of various crops, he explains.

First-step processing alone can return a majority of the processed commodities to the local community, he adds. Soybeans, for example, emerge 80% soybean oil, used by the farmer in feed mash. Industry uses the remainder in manufacturing cooking fat and soap.

Greatest economic advantage however is that farmers can concentrate on their most profitable crop instead of having to raise many, he points out. Their profits as suppliers of raw material and processors will be far more than those as farmers alone.

Farm products most affected are those costly to ship, because of bulk or perishability, and those requiring many steps of handling between producer and consumer. The local processing, on the other hand, can be done through individual farms, cooperatives, or arrangement with local utilities or rural branches of city industries.

The plan takes into account the anticipated postwar surpluses of mechanically trained young people, of various agricultural products, and of factory space, Doane relates, all of which can be combined into profitable production.

It is already in successful operation on the 7,000-acre Bobshaw plantation in Mississippi, one of the many under Doane's management.

Freezing Chop Suey Boosts Its Sales

PITTSBURGH—In announcing its distributorship of Changs Chop Suey as a frozen food, Frozen Food Storage Co., Inc., here reports orders from even the corner grocery spurting from one dozen to 10 dozen in one week.

"In two weeks, frosted chop suey has become one of the fastest moving items I know," says Sales Manager J. R. Bell. "Our client has so many orders he can supply only Pittsburgh's Allegheny County."

Co-op Supplier Considers Adding Locker Plant Line

BUFFALO—The Co-operative GLF Exchange, Inc., co-operative supplying farm supplies in the northeast, is considering the possibility of setting up freezer locker plants for farmers, James A. McConnell, general manager, announced here. He also reported that sales of the co-operative in 1943 totaled $75,000,000 against $58,107,000 in the previous year.

Montgomery, Ala. to Have 500-Locker Plant

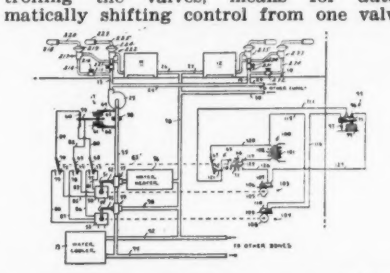
MONTGOMERY, Ala. — A 500-locker quick freeze plant with facilities for curing meat is to be built in Montgomery by Joe Ben Greer. He explained his plan at a recent meeting of the Montgomery County Bureau and said he already had the equipment for the plant but had to obtain a building.

PATENTS

Weeks of Mar. 21-28

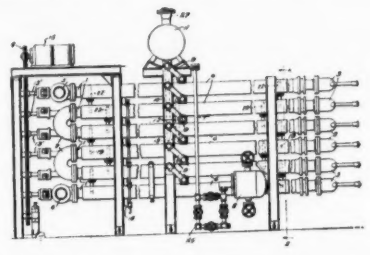
2,344,555. HEATING AND COOLING SYSTEM. William L. McGrath, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application Dec. 31, 1941, Serial No. 425,049. 7 Claims. (Cl. 257—4).

1. In apparatus of the character described, in combination, a water circulating system, heating means and cooling means for the water, a valve controlling the temperature of the water when heating is required of the system, a valve controlling the temperature of the water when cooling is required, condition responsive means for automatically controlling the valves, means for automatically shifting control from one valve



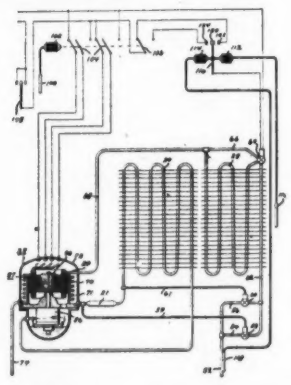
to the other depending upon outdoor temperature, and control means operated as a result of valve movement for preventing a shift to one valve until the other valve is in its minimum position.

2,344,606. DOUBLE PIPE EXPANSION CHILLER. Eugene A. Edmonds, Louisville, Ky., assignor to Henry Vogt Machine Co., Inc., Louisville, Ky., a corporation of Kentucky. Application Aug. 30, 1943, Serial No. 500,573. 10 Claims. (Cl. 62—141).



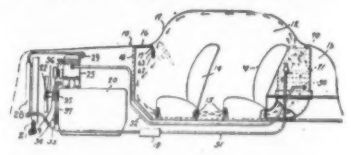
1. Double pipe chiller comprising a serpentine coil having the form of side by side banks of superposed jacketed straight substantially horizontal inner pipe sections serially connected at opposite ends providing a conduit for the flow of liquid to be cooled, corresponding sections of each bank being in horizontal adjacency, an equalizing connection between longitudinally adjacent jackets communicating therewith above the bottoms of said jackets and below the normal liquid level therein, sump connections between said horizontally adjacent jackets communicating therewith at the bottom level of said jackets and dipping intermediately below said level, said sump connections being provided with valved drainage outlets, and an overflow connection between each horizontally adjacent pair of jackets and the next lower pair, communicating with the upper pair at a point determining the liquid level in said pair and with the lower pair at a point below the liquid level in said lower pair.

2,344,706. REFRIGERATING APPARATUS. Andrew A. Kucher, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Feb. 28, 1940, Serial No. 321,269. 9 Claims. (Cl. 257—3).



2. In combination, means for circulating a stream of air to be conditioned, a first heat exchange element in thermal exchange relationship with said stream, a second heat exchange element in thermal exchange relation with said stream, means for circulating a volatile refrigerant through said first heat exchange element, means for circulating water through said second heat exchange element when either heating or cooling of the air is required, means preventing flow of water through said second heat exchange element when cooling is required and the water temperature is high and the incoming air temperature is low, and means preventing flow of water through said second heat exchange element when heating is required and the water temperature is low and the incoming air temperature is high.

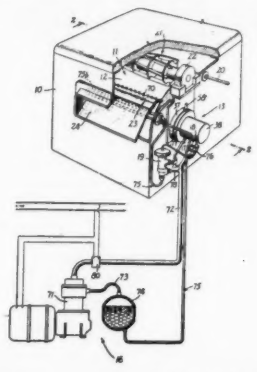
2,344,864. AIR CONDITIONED VEHICLE. Walter R. Griswold, Detroit, Mich., assignor to Packard Motor Car Co., Detroit, Mich., a corporation of Michigan. Application Feb. 14, 1941, Serial No. 378,880. 2 Claims. (Cl. 62—117).



1. In a vehicle having a closed type body, a compressor-condenser-evaporator refrigerating system for cooling the air in the body, an engine for driving the vehicle, a driving connection from the engine to the compressor including a magnetic clutch, an engine ignition circuit having a battery and an ignition switch, a branch circuit leading from the ignition circuit beyond the ignition switch to the magnetic clutch, and a switch in the branch circuit operable in response to the temperature of air in the body, said temperature responsive switch being in series with the ignition switch.

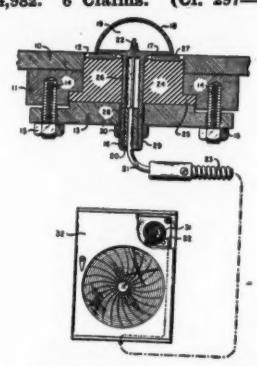
2,344,922. REFRIGERATION. Francis M. Raver, York, Pa., assignor to Flakice Corp., of New York, Brooklyn, N. Y., a corporation of New York. Application Jan. 13, 1941, Serial No. 374,274. 12 Claims. (Cl. 62—106).

9. In ice-making apparatus, in combination, a tank, a cylinder mounted in said tank and rotatable about a horizontal axis, said cylinder having a freezing surface over 50% submerged in a liquid to be frozen, an ice-freeing unit mounted above said cylinder for freeing from said freezing surface ice formed thereon, and an ice-collecting plate for collecting ice from the cylinder after it is freed from



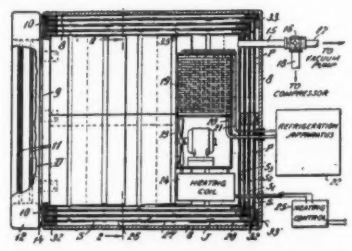
the freezing surface, said ice-collecting plate being slightly above the water level, and means for maintaining the temperature of the layer of water beneath the ice-collecting plate sufficiently above freezing temperature to prevent ice from collecting in the water under said ice-collecting plate.

2,345,175. TEMPERATURE RESPONSIVE DEVICE. John G. Booth, Philadelphia, and Louis Gess, Jenkintown, Pa., assignors to the Brown Instrument Co., Philadelphia, Pa., a corporation of Pennsylvania. Application Jan. 18, 1941, Serial No. 374,982. 6 Claims. (Cl. 297—3).



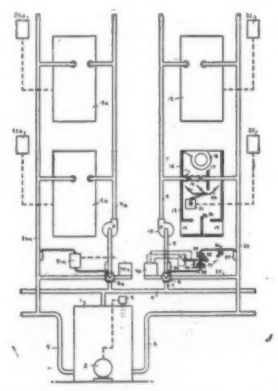
1. In combination, a thermo-sensitive element comprising, a member, a substantially hemispherical wall sealed to said member so as to form a chamber therebetween, a thermo-sensitive fluid contained in said chamber and changeable in pressure in accordance with the temperature of said wall, means communicating with said chamber for transmitting the pressure in said chamber to a pressure responsive device, a container, and adjustable means for mounting said thermo-sensitive element in said container so that only the substantially hemispherical wall extends into said container, said adjustable means including locating means cooperating with the container whereby said element may always be located in the same position in the container.

2,345,204. INTERIOR CHAMBER INSULATION. Erwin Lodwig, Franklin Square, N. Y., assignor to Mobile Refrigeration, Inc., New York, N. Y., a corporation of New York. Application April 2, 1942, Serial No. 437,343. 7 Claims. (Cl. 220—9).



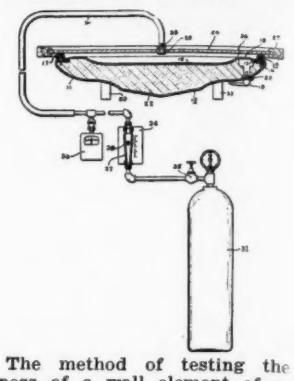
1. Apparatus for thermally insulating the wall structure of a chamber subject to variations in interior pressure and temperature comprising, a plurality of spaced substantially parallel superimposed sheets of thin non-corrosive heat reflecting metal covering and extending substantially parallel to and adjacent the inner surface of the wall structure, said sheets forming dead air spaces therebetween, and self-closing vents in said sheets, openable by excess pressure on either side thereof, for permitting equalization of air pressure between the interior of the chamber and the several dead air spaces while preventing the flow of ambient air currents through the sheets.

2,345,277. AIR CONDITIONING SYSTEM. William L. McGrath, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application Sept. 18, 1941, Serial No. 411,348. 7 Claims. (Cl. 257—2).



1. In a system of the class described, in combination, a heat exchange device through which heat exchange fluid is passed for controlling the temperature of a medium, a first controller for graduatingly controlling the flow of said medium across said heat exchange device, a second controller for controlling the temperature of the heat exchange fluid circulated through said heat exchange device, and means responsive to the differential in temperature of the heat exchange fluid before and after it flows through said heat exchange device for controlling said second controller.

2,345,387. METHOD OF TESTING REFRIGERATOR CABINETS. Howard M. Elsey, Oakmont, Pa., assignor to Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., a corporation of Pennsylvania. Application May 20, 1941, Serial No. 394,277. 4 Claims. (Cl. 73—51).



1. The method of testing the fluid-tightness of a wall element of a refrig-

(Concluded on Page 23, Column 2)

CLASSIFIED ADVERTISING

RATES for "Positions Wanted," 5¢ per word; minimum charge, $2.50. Three consecutive insertions, 12½¢ per word; minimum charge, $6.25.

RATES for all other classifications, 10¢ per word, minimum charge, $5.00 per insertion. Three consecutive insertions, 25¢ per word, minimum charge, $12.50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count.

EQUIPMENT FOR SALE

FOR SALE: 4, 6, 8 hole converted Frigidaire Expansion cabinets with remote ⅓ hp. A.C. 60 cycle units. Send for list and prices. EDISON COOLING CORP., 310 E. 149 St., New York 51, N. Y.

DRY BOTTLE COOLERS. ELECTRIC. Equipped with vending machine, blower coil, and self-contained ¼ H.P. Universal Cooler Corporation unit ready to plug in. Brand new. Streamlined. No priority required. Price $132.50 net. GENERAL REFRIGERATOR COMPANY, 855 North Broad St., Philadelphia, Pa.

FOR SALE, 400 Frigidaire Model "K," $35; 500 Kelvinator Model 400, $42.50. All units are removed from ice cream cabinets, with SO_2 gas, in running condition, with ½-hp. 60 cycle, 110-220 V, and low pressure switch. EDISON COOLING CORP., 310 E. 149th St., New York 51, N. Y.

FOR SALE: 86 Brunswick Model No. 55 2/2 bbl. Direct Draw Dispensers with condensing unit attached and 147 No. 1201 United Koolmasters 2/2 bbl. Direct Draw Dispensers with condensing unit attached. Prices on request. No priority required. R. PERLICK BRASS CO., 3110 W. Meinecke Ave., Milwaukee 10, Wis.

EQUIPMENT WANTED

USED EQUIPMENT WANTED: Air conditioning and refrigeration systems and machinery including self-contained units, coils, high-sides, shell and tube coolers, and controls. We will purchase entire systems, especially interested in large sizes, both reciprocating and centrifugal. E. M. FAIRBANKS CO., 475 Fifth Ave., New York 17, N. Y.

POSITIONS AVAILABLE

EXCELLENT OPPORTUNITY in charge of sales department of well established and recognized wholesale parts and accessories refrigeration wholesaler. A large volume business already established covering four Eastern States. Must be thoroughly familiar with refrigeration business. State qualifications in full. Box 1531, Air Conditioning & Refrigeration News.

BEST OPPORTUNITY in all America both during and after the war. San Diego, Calif. offers you everything worth living for. We need good service men. Will pay top wages, time and a half and double time for over 44 hours plus liberal commissions. WRIGHT REFRIGERATION SERVICE, 1337 India St., San Diego 1, Calif.

REFRIGERATION ENGINEER: Old established midwestern manufacturing firm requires services of a refrigeration engineer to assist in present and postwar plans for new designs, ideas, etc. Prefer individual who has experience with fractional H.P. sealed units and one who is capable of running laboratory tests with calorimeter, thermocouples, etc. In answering give age, draft status, past experience, etc. Position permanent. Reply Box 1540, Air Conditioning & Refrigeration News.

AIR CONDITIONING and industrial refrigeration engineer with proven sales and supervision record. Immediate opportunity to affiliate with prominent Southern California distributor and contractor. Excellent postwar outlook. Give complete history and details in first letter. Reply Box 1521, Air Conditioning & Refrigeration News.

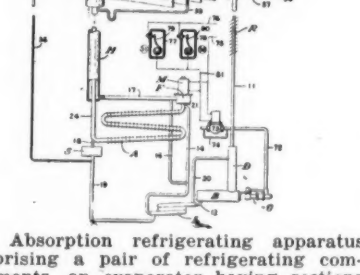
WANTED refrigeration service man to service ice cream cabinets, soda fountains, and all types compressors. Write at once giving qualifications, references, and draft status. Post Office Box 3147, Orlando, Fla.

Patents (Cont.)

(Concluded from Page 22, Column 5)

erator, said wall being encircled by a gasket, said method comprising placing an imperforate and transparent plate in sealing engagement with said gasket, forcing a fluid at a predetermined rate into the space defined by said plate, wall, and gasket, observing the seating of said gasket against said plate by a visual inspection through said plate, and determining whether the pressure in said space rises above a predetermined standard.

2,345,432. DOOR LATCHING MECHANISM. Edmund F. Schweller, Dayton, Ohio, assignor to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application Jan. 22, 1942, Serial No. 427,791. 2 Claims. (Cl. 292—128).

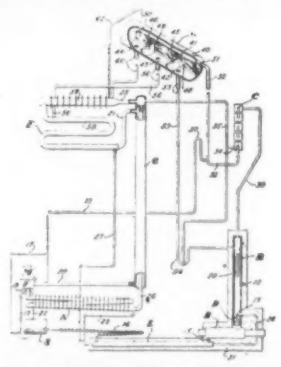


1. A latching mechanism for a door hingedly mounted on a cabinet of the front opening type so that the door may swing about an axis between a closed position and an open position, said mechanism comprising a support secured to the cabinet adjacent the door jamb, a pin carried and spaced by said support from the cabinet, a swingable means pivotally mounted on said pin and forming a combined catch and operating member adapted to engage a striker element on an edge of the door and the striker element having a catch portion thereon, a spring for normally urging said means toward the striker element on the door, said support having spaced side walls one of which extends outwardly of the cabinet and overlaps the inner end of the catch and operating member to provide therewith stop means for the door-latching position of said member, said means having an end part extending beyond the front face of the door and serving as a handle for said operating member, a catch portion formed on said means intermediate said end part thereof and its pivotal mounting adapted to maintain the door in closed position, and said handle end of said means being adapted to receive a force applied thereto in a direction substantially paralleling the front of the cabinet to release said catch portion on said operating member from the catch portion of the striker element for permitting opening of the door.

2,345,453. REFRIGERATION. George A. Brace, Winnetka, Ill., assignor to the Hoover Co., North Canton, Ohio, a corporation of Ohio. Application July 20, 1938, Serial No. 220,198. 21 Claims. (Cl. 62—5).

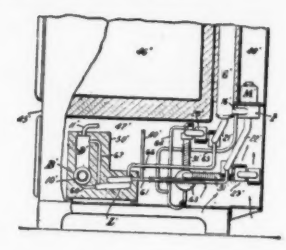
5. Absorption refrigerating apparatus comprising a pair of refrigerating compartments, an evaporator having sections positioned to refrigerate each of said compartments, a solution circuit including a boiler and an absorber, a pressure equalizing medium circuit including said absorber and evaporator, means for supplying refrigerant vapor generated in said boiler to said evaporator in liquid phase, a eutectic tank enclosing one of said evaporator sections, and a control mechanism for said refrigerating apparatus including a control element in each of said compartments for energizing said refrigerating apparatus in response to refrigeration demand in its associated compartment.

2,345,454. REFRIGERATION. George A. Brace, Winnetka, Ill., assignor to the Hoover Co., North Canton, Ohio, a corporation of Ohio. Application May 22, 1939, Serial No. 274,892. 19 Claims. (Cl. 62—119.5).



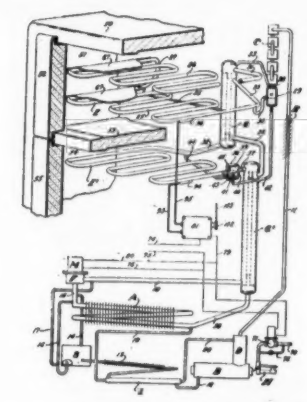
4. Absorption refrigerating apparatus including a generator, a reflux rectifier, a condenser, and an evaporator including box-cooling and freezing sections connected in circuit, a dividing member connected to receive liquid refrigerant from said condenser, said dividing member including an inlet chamber receiving liquid supplied from said condenser and a plurality of outlet chambers, means connecting said reflux rectifier and each of said evaporator sections to individual outlet chambers, and wicks extending from said inlet chamber into each of said outlet chambers, the wicks being of different sizes to supply metered quantities of refrigerant liquid to each section of said evaporator and to said reflux rectifier.

2,345,461. REFRIGERATION. Curtis C. Coons, North Canton, Ohio, assignor to the Hoover Co., North Canton, Ohio. Application Feb. 5, 1940, Serial No. 317,385. 21 Claims. (Cl. 62—119.5).



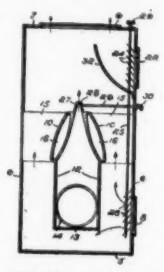
3. Refrigerating apparatus comprising a cabinet having an insulated storage chamber, a lower mechanism compartment and a vertical cooling air flue opening into the upper end of the mechanism compartment, an absorption refrigerating system associated with said cabinet comprising an inert gas circuit including a tubular air-cooled absorber in said mechanism chamber and a cooling unit, an absorption solution circuit including a boiler assembly and said absorber, said absorber comprising a lower section arranged to receive lean solution from said boiler assembly and to discharge lean inert gas to said cooling unit and an upper section arranged to receive rich gas from said cooling unit and to discharge strong solution to said boiler assembly, said lower absorber section being located directly beneath the lower end of said air flue whereby the weak solution and lean inert gas are maintained at a low temperature and a straight line cooling air flow is provided over said lower absorber section.

2,345,505. REFRIGERATION. Arnold D. Siedle, Canton, Ohio, assignor to the Hoover Co., North Canton, Ohio. Application April 6, 1940, Serial No. 328,197. 21 Claims. (Cl. 62—5).

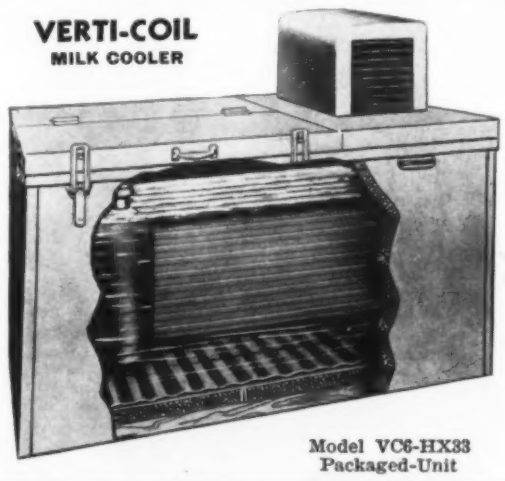


5. A refrigerating device comprising a cabinet construction including a storage compartment having high and low temperature chambers, and a mechanism compartment arranged for flow of cooling air therethrough, a cooling unit in each of said chambers, a generator and an air-cooled condenser in said mechanism compartment connected to receive refrigerant vapor from said generator, an air-cooled absorber in said mechanism compartment connected with said generator to form a solution circuit and also connected with said cooling units to form an inert gas circuit, said inert gas circuit being so arranged that the inert gas flows through the cooling unit in said low temperature chamber, then through the cooling unit in said high temperature chamber and then through said absorber, means for supplying liquid refrigerant from said condenser to the cooling unit in said low temperature chamber, means for diverting the liquid refrigerant produced in said condenser to said high temperature chamber cooling unit upon the occurrence of a predetermined condition, means for controlling the production of refrigerant vapor by said generator, means responsive to the refrigerating demand of said low temperature chamber for actuating said vapor production control means, and means responsive to a predetermined condition in said high temperature chamber for actuating said vapor production control means.

2,345,537. HEAT EXCHANGE UNIT. Charles R. Keep, Norwood, Mass., assignor to B. F. Sturtevant Co., Boston, Mass. Original application May 16, 1942, Serial No. 443,203. Divided and this application Jan. 1, 1943, Serial No. 471,048. 3 Claims. (Cl. 257—137).



1. A substantially rectangular heat exchange unit having substantially vertically extending walls, a discharge outlet in its upper wall, a recirculated air inlet in the lower portion of one of said vertically extending walls, and a primary air inlet, comprising a pair of elongated heat exchange tubes arranged to form between adjacent external surfaces, an upwardly extending ejector nozzle, said tubes having internal openings for the passage of a heat exchange fluid and having extended surface fins extending from one tube to said one of said walls and extending from the other tube to the wall of said unit opposite said wall, means forming a passage conducting air from said primary air inlet into said nozzle and forming walls isolating the air from said primary inlet from the air from said recirculated air inlet, means forming another recirculated air inlet in said one wall between said nozzle and said outlet, dampers in said recirculated air inlets, and means at the upper ends of said tubes for varying the induction.



Postwar Merchandising Policies To Be Debated at Rema-N.R.S.J.A. Meetings

(Concluded from Page 1, Column 5)

Office of Civilian Requirements of WPB.

11:30 "National Refrigeration War Council," Harry Alter.

12:00 "Latest War News," Robert F. Hurleigh, Columbia Broadcasting System.

12:15 Talk by Naval Personnel Officer.

Following is the program of the Refrigeration Equipment Manufacturers Association meetings:

Tuesday, April 25, 10:00 a.m.
South Ballroom

Meeting Called To Order—R. H. Luscombe, President of Rema.

Brief Report of Rema Activities—R. H. Luscombe.

Our Association's Financial Condition—J. A. Strachan, Treasurer of Rema.

"Post-War Financing"—Walter E. Hoadley, Jr., Industrial Economist, Federal Reserve Bank of Chicago.

"Watch Your Inventories"—H. L. Consley, Director of Procurement, York Corp.

"Consigned Stocks—Its Benefits and Evils"—B. J. Scholl, Brunner Mfg. Co. and Frank K. Smith, Tecumseh Products Co.

"How Long Price Control"—H. F. Spoehrer, Spoehrer-Lange Co.

"Will Pricing Discount Policies Change" — J. A. Strachan, The Weatherhead Co.

Open Discussion of Above Subjects.

"WPB Looks Ahead"—Frederick W. Smith, Chief, Special Equipment Branch, General Industrial Equipment Division, WPB.

Tuesday, April 25, 12:30 p.m.
North Assembly Room

Note: At the conclusion of the Morning Session, a special Luncheon of the Product Groups is awaiting you, with refreshments, in the North Assembly Room. Please proceed there immediately.

"The Value of a Commercial Standards Program in Post-War"—I. J. Fairchild, Chief, Division of Trade Standards, U. S. Department of Commerce, National Bureau of Standards.

"Plans For Industry Advisory Committees" — Sterling F. Smith, Chief, Refrigeration & Air Conditioning Section, General Industrial Equipment Division, WPB.

Product Group Meetings 2:30 p.m.
Open to Rema Members and Invited Guests

1. Heat Transfer Equipment—Room 16.
2. High Side Equipment—Room 6.
3. Temperature Cotrols—Room 3.
4. Flow Control Valves—Room 11.
5. Valves, Fittings, and Tubing—Room 1.
6. Water and Beverage Coolers—Room 4.
7. Refrigerants, Lubricating Oils and Chemicals—Room 5.
8. General Product Group—Room 18.

(These meetings will adjourn at 5:00 p.m.)

Wednesday, April 26, 2:00 p.m.
South Ballroom

SYMPOSIUM OF LABOR RELATIONS

Address—R. M. Tree, Vice President, Mueller Brass Co.

Open Forum Discussion—led by R. E. Harris, Mueller Brass Co.

What are apt to be some of our Labor Relations problems from now on:

1. Are present unions to continue as strong as they are now?
2. What is to be done with women in industry when members of our Armed Services return for their jobs?
3. What plans are you using to keep in touch with employes now in the Armed Forces?
4. 1944 labor shortages may be reduced by making contacts with the Veterans Employment Service of U.S.E.S.
5. Labor contracts today may be the pattern for the peacetime economy—work them out carefully.
6. What can management do legally to help unions to get the proper type of leadership for the future?

C. W. Brownell,
Legal Council, Wolverine Tube Co.

REACTIONS ON THE BARUCH REPORT

"War and Post-War Adjustment Policies"—E. M. Flannery, The Bush Mfg. Co.

"Settlement of Terminated War Contracts"—Col. Harry W. Jarrow, Jarrow Products Co.

"Tightening the Mobilization Machine"—F. J. Hood, Ansul Chemical Co.

Jobbers Program

Final details of the program announced by the National Refrigeration Supply Jobbers Association are as follows:

Tuesday, April 25

Private Dining Room No. 2

9:30 a.m. Meeting Called to Order by Harry Alter, president.

President's Report.

"Sound Business and Credit Tactics for a Refrigeration Parts Jobber and Methods of Compensating Salesmen," T. I. Glou, Central Service Supply Co., Syracuse.

"The Jobber—1944 and After," Sterling F. Smith, WPB.

Report on Activities of the Catalogue Committee—H. R. McCombs, chairman.

Luncheon.

Tuesday Afternoon

Report on Assigned Tasks of Manufacturers Relations Committee (Discussion of "Freon" Situation)—H. W. Small, chairman.

Report on Membership Campaign—Frank J. Walter, chairman.

Discussion of Jobbers' Future Policy Problems—George J. Roche, Moderator.

(a) Shall the jobber also manufacture?—Boyd Evans, first speaker.

(b) Shall the jobber distribute domestic refrigerators?—Robert W. Sheperdson, first speaker.

(c) Shall the jobber distribute frozen food cabinets?—H. W. Small, first speaker.

(d) Shall efforts be made to induce prominent manufacturers to sell jobbers (1) parts, and (2) hermetic units for replacement?—Irving J. Fajans, first speaker.

Wednesday Afternoon, April 26

Private Dining Room No. 2

Meeting of jobbers to exchange material and hold an informal discussion of the future of the refrigeration supply jobbing business.